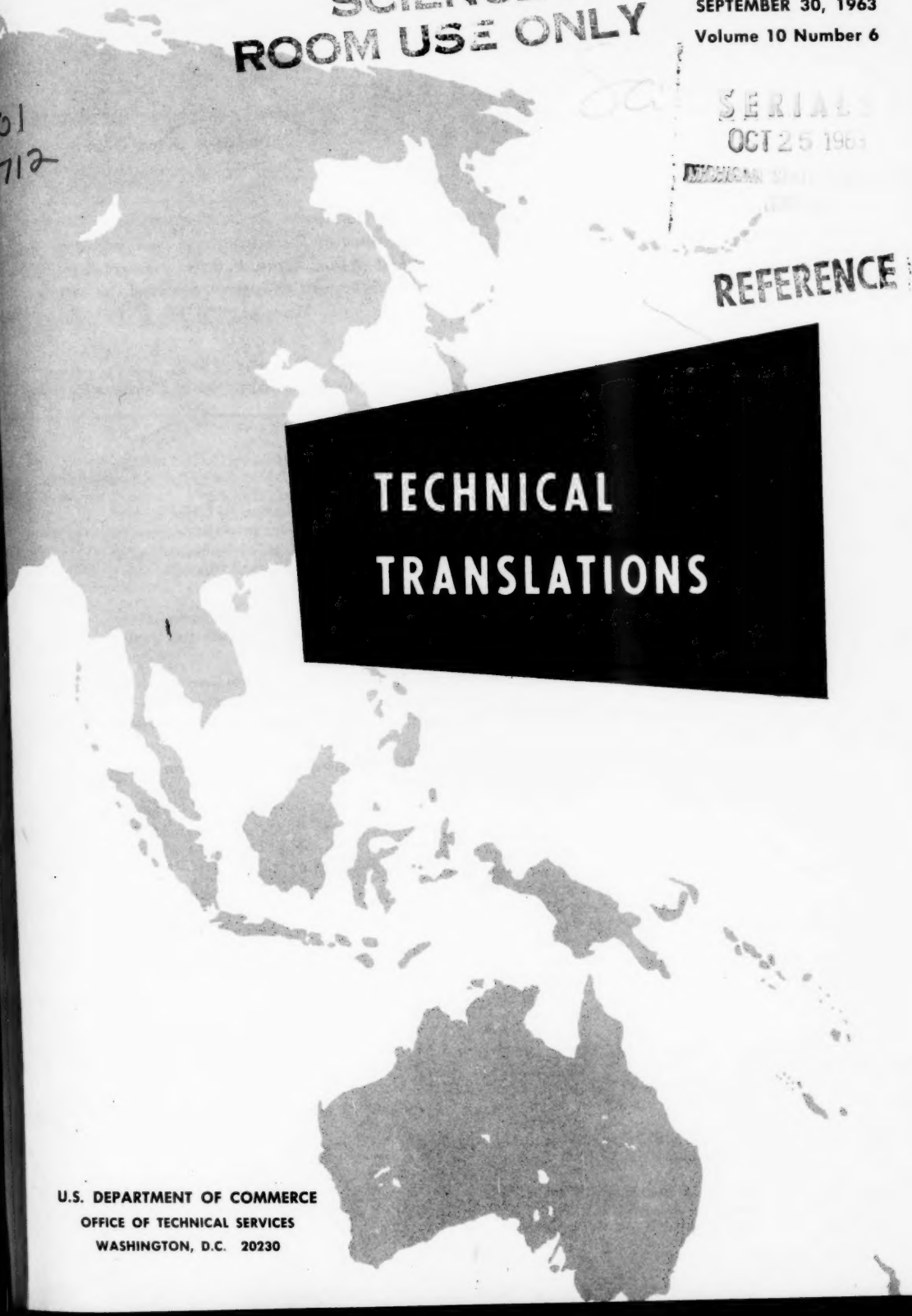
CSR

SCIENCE
ROOM USE ONLY

SEPTEMBER 30, 1963
Volume 10 Number 6

SERIALS
OCT 25 1963
MICHIGAN STATE

REFERENCE



TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON, D.C. 20230

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
Luther H. Hodges, *Secretary*

OFFICE OF TECHNICAL SERVICES
Donald A. Schon, *Director*

Issued twice a month. Annual subscription $12 ($4 additional for foreign mailing). Single copy 60 cents. Make remittance payable to Superintendent of Documents and mail either to a Department of Commerce field office or to Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402. Address changes should be sent to Superintendent of Documents.

Contents may be reprinted freely. Mention of source will be appreciated.

Use of funds for printing this publication approved by the Director of the Bureau of the Budget, November 22, 1961

TECHNICAL TRANSLATIONS is published in cooperation with the Special Libraries Association Translations Center to list and abstract translated technical literature available from the Office of Technical Services, the Library of Congress, the Special Libraries Association, cooperating foreign governments, commercial translators and publishers, universities, and other sources.

The Special Libraries Association is responsible for collecting translations from non-Government sources, both domestic and foreign; the Office of Technical Services for collecting translations from both U.S. and foreign government sources since 1940.

The material available from the Office of Technical Services generally has been translated by other agencies of the Government and by private organizations and turned over to OTS for reproduction and distribution. Therefore, OTS assumes no responsibility for the accuracy of the translations.

OTS provides reference service for the location and identification of translated materials, both completed translations and translations in process.

UNITED STATES DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON, D.C. 20230

TECHNICAL TRANSLATIONS

Volume 10, Number 6 Pages 597 - 717 September 30, 1963

*Descriptors marked with an asterisk are included in the subject index.

BIBLIOGRAPHY

Library of Congress, Washington, D. C.
MONTHLY INDEX OF RUSSIAN ACCESSIONS. Aug 63, 325p.
Order from GPO $12.00/year

This index is a record of the publications in languages spoken in the Soviet Union currently received by the Library of Congress and a group of cooperating libraries. It consists of three parts: Part A lists monographic literature published after 1944, with the title in the original language preceded by its English translation; Part B lists periodicals published after 1946; Part C constitutes a subject guide to both the monographs and periodical articles listed in Parts A and B.

AGRICULTURE

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY NO. 73. 8 July 63, 12p. JPRS: 20061.
Order from OTS $0.50 63-31226

Trans. from Leninskoe Znamya (USSR) 1963, 27 Apr; Sel'skaya Zhizn' (USSR) 1963, 22 May, p. 2; 25 May, p. 4; Trud, Moscow (USSR) 1963, 18 Apr; Sovetskaya Litva (USSR) 1963, 25 Jan, p. 1; Turkmenskaya Iskra (USSR) 1963, 7 Apr, p. 1.

DESCRIPTORS: *Industrial production, *Tractors, *Agricultural machinery, *Fuel pumps, Diesel engines, *Welding, Friction, Industrial plants, Handling, Cereals, Machine tools.

Contents:
Breakdown in supply of fuel pumps for D-50 engines, by Yu. Lepetov
Disruption of KGP-2 potato combine production, by V. Yambaev
Kirovets 220-HP tractors undergo testing
Minsk tractor plant laboratory develops new welding method
New machines; new enterprises
The Druzhba combine
Mogilev-Podol'sk plant produces the KShP-3 loader
Decisions of the Mossel'mash Communists.

USSR INDUSTRIAL DEVELOPMENT SOVIET TRACTORS AND AGRICULTURAL MACHINERY NO. 74. 8 July 63, 14p. JPRS: 20068.
Order from OTS $0.50 63-31231

Trans. of Mashinostroitel' (USSR) 1963, no. 5, p. 7, 22; and 12 selected articles from May-June 63 issues of 9 Russian newspapers.

DESCRIPTORS: *Industrial production, *Tractors, *Agricultural machinery, Tracked vehicles, Design, Industrial plants.

Contents:
Lipetsk tractor plant reconstruction
New model caterpillar tractor
T-125 tractors leave Kharkov
New standard tractors of the Khar'kov tractor assembly plant
New tractors for vineyards and cornfields, by N. Boiko
Pavlodar plant produces new type cultivators
Lyubertsy plant designs single-row corn combines
Beet harvesting combines in Lithuania and Estonia
Rigasel'mash potato harvesting combine
New harvesters and straw choppers of the Morozovsk and Rostov plants
Akhturka plant produces new feed mincer
Borisovskii hydraulic equipment plant produces defective goods, by A. Zenchenko
Ore concentration equipment plant produces corn combine.

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AND AGRICULTURAL MACHINERY NO. 75. 11 July 63, 21p. JPRS: 20123.
Order from OTS $0.75 63-31259

Trans. of 18 selected articles from May-June 63 issues of 10 Russian newspapers.

DESCRIPTORS: Industrial production, *Tractors, *Agricultural machinery, *Commerce, *Conveyors, Industrial plants, Bearings, Tests, Diesel engines.

Contents:
Export of sprayers from L'vovsel'mash
The T-125 and KhTZ truck tractors are undergoing state tests
Initial delivery of Omichka milking mach nes
Sugarbeet harvesting combine production
Initiation of TSNK-3 scraper conveyer production
Lack of components for GAN-3 sprayers, by A. Kubertavichyus
Lithuanian grain combines and windrowers
Production of Severo-Kavkazskii economic region plants
ZhVN-6 and ZhVN-10 windrowers in mass production
Status of AMV-0.4 mower-chopper production
Production of new KSR-2 ensilage combines
Threat of work stoppage at the Khar'kov tractor plant
Machine tests at the Baltic region machine testing station, by G. Belova
Exhibit of new agricultural equipment, by V. Kiryasov
New Minsk engine plant
Building progress at the Minsk engine plant, by V. Rozhkov
DAS-2 milking machines
KIP-1.5 mowers and mills shipped.

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY
NO. 76. 12 July 63, 20p. JPRS: 20158.
Order from OTS $0.75 63-31275

Trans. of 20 selected articles from May-June 63 issues of 13 Russian newspapers.

DESCRIPTORS: *Industrial production, *Tractors, *Agricultural machinery, Personnel, Selection, Failure (Mechanics), Industrial plants, Supplies, Scheduling, Management engineering, *Agriculture, *Machines, Automation, Corn, Vegetables, Potatoes, Transportation, Cereals, Milk.

Contents:
Sovnarkhoz cadre selection, by G. Udovenko
Trouble with tractors
Chelyabinsk tractor plant, by S. Ivanov
Thirtieth anniversary of Chelyabinsk tractor plant
Assembly line troubles at Khar'kov plant
T-125 tractors
Kirovets tractors
Tractors and combines, by Zagurskii and others
Universal farm equipment in the Kirgiz, by I. Dzyubenko
Lyubertsy plant output
Modernization of Kazakhsel'mash
Corn harvesting machinery
New silage harvesting combines
Rigasel'mash beet harvesting combines
New potato harvesting combine
New machinery from Mingechaursel'mash
L'vov ships farm machinery to various countries
Alma-Ata develops ZPA-100 grain loader
Rigasel'mash plant design bureau develops Magya Milker
Gruzsel'mash plant director.

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY
NO. 77. 15 July 63, 15p. JPRS: 20161.
Order from OTS $0.50 63-31276

Trans. of 11 selected articles from 1963 issues of 8 Russian newspapers.

DESCRIPTORS: *Industrial production, *Tractors, *Agricultural machinery, Tests, Industrial plants, Automation, Transportation, Scheduling, Management engineering, Standardization, *Machines, Construction, *Agriculture, Metallurgy, Supplies.

Contents:
Tests of new agricultural machinery with the K-700 tractor
The Leningrad tractor plant
Moscow City economic region to increase production of potato harvesters
A new combine at the Gomel' plant
A new Minsk tractors shipped
For the rhythmic work of every enterprise
Standardized tractors
Building a new Belorussian industry
Wide-swath machines (reapers) are being mass produced
Soon the harvest! But where are the machines
Machines will be forthcoming.

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY
NO. 78. 15 July 63, 12p. JPRS: 20173.
Order from OTS $0.50 63-31287

Trans. of Mashinostroitel' (USSR) 1963, no. 3, p. 95-98, 103-106.

DESCRIPTORS: *Industrial production, *Tractors, *Agricultural machinery, Vehicle wheels, Vegetables, Precision equipment, Design.

Contents:
New models of wheel traction-tractors, by V. T. Kononenko
Sugar-beet precision planters, by Ya. I. Slutsker and B. F. Kuznetsov
The mounted single-bar haymower KZN-2, 1 designed for high-speed operation, by I. A. Matrosova.

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY
NO. 79. 16 July 63, 23p. JPRS: 20188.
Order from OTS $0.75 63-31296

Trans. of Partiinaya Zhizn' (USSR) 1963, no. 9, p. 35-40; from Rabochaya Gazeta (USSR) 1963, 25 May, p. 2; Izvestiya (USSR) 1963, 29 Apr, p. 4; partial trans. of Traktory i Sel'khozmashiny (USSR) 1963 [v. 33] no. 5, p. 4-5, 35, 37-39, 41.

DESCRIPTORS: *Industrial production, *Tractors, *Agricultural machinery, Industrial plants, Drive shafts, Economics, *Steel, Foundries, *Tractor engines, Air cooled, *Vehicle chassis components, Seeds, Fertilizers, Trailers.

Contents:
Rostov combine builders fulfill party and government decisions, by A. M. Merkulov
Specialization in farm equipment manufacture, by I. Serikov
Step shafts to tapered shafts, by D. A. Simonov
Increased productivity at the Minsk tractor plant, by V. Lepeshkin

Specialization in tractor engine production, by V. Petukhov
Family of air-cooled tractor engines, by E. A. Sarkisyants and L. Ya. Bekritskii
Shortage of tractor spare parts
SKS-1 large seedling planter, by M. F. Lyutin and A. V. Nazarov
1-PTU-3PP universal manure spreader trailer, by G. F. Lobachev.

Farzaliev, M. M., Khalimbekov, M. M. and others.
LUNG INFLAMMATIONS IN LAMBS. [1962] [10]p.
FASEB manuscript no. S 260-2.
Order from OTS or SLA $1.10 63-19018

Trans. of Veterinariya (USSR) 1962 [v. 39] no. 2, p. 27-30.

DESCRIPTORS: *Lungs, *Inflammation, *Sheep, Heart, Liver, Anatomy.

Comparative autopsies were made on lambs which had died from natural infection and those which were infected experimentally by a bacteria which was found to resemble pleuropneumonia microorganisms. Two cultures were used to inoculate the experimental lambs: first, a broth culture prepared from the organs of lambs which had died from the disease; and, second, a culture grown on Martin-serum broth. The pathoanatomical changes in lambs inoculated with the second culture were identical but less pronounced than the changes effected by the first culture. The changes in animals after experimental infection differed somewhat from the changes in natural infection. The disease is characterized by considerable disintegration of erythrocytes, hemorrhagic inflammation of the lungs, and changes in the heart and liver.

Fester, William Fredlick.
A METHOD FOR THE PRODUCTION OF DIVALENT METAL SALT OF ALKYLENE BIS-DITHIOCARBAMIC ACID. July 63, 9p.
Order from SA $16.00 SA Code-P-118

Trans. of Japanese patent 206,998, cl. 16-B-82 (30-F-34) (30-F-36) appl. no. 9544/1952 filed 27 Sep 51, pub. 23 Apr 54 as 2173/1954, by Rohm and Haas Co. (U. S. A.) (priority claimed: U. S. no. 12635/51, 20 Aug 41).

DESCRIPTORS: *Fungicides, Production, *Carbamic acid, Thio radicals, *Propenes, *Ethylenes, Metallic compounds, *Zinc compounds, *Magnesium compounds, *Cadmium compounds, *Iron compounds, *Copper compounds, *Barium compounds, Salts, Carbon compounds, Sulfides, Ethyleneamines.

Ginzburg, E. N.
SOME PHYSICAL COEFFICIENTS OF SUPERPHOSPHATE RIPENING IN A CHAMBER. [1963] 11p. (figs. omitted).
Order from OTS or SLA $1.60 63-14570

Trans. of Khimicheskaya Prom[yshlennost'] (USSR) 1945, no. 3, p. 8-9.

DESCRIPTORS: *Phosphates, *Calcium compounds, *Sulfates, *Shear stresses, *Fertilizers, Solids, Physical properties.

Henkel, H. and Becker, M.
CHANGES UPON THE PRESERVATION OF GREEN FEED (HAYMAKING, SILAGE MAKING, ARTIFICIAL DRYING). Rept. no. 2 on Investigations of the Actual Content of Raw Fat, Pure Fat and Essential Fat Constituents in Farm Basic Feed. [1962] [16]p. (tables refs. omitted) 2 refs.
Order from SLA $1.60 63-10848

Trans. of Archiv für Tierernährung (East Germany) 1960, v. 10 [no. 6] p. 401-[413].

DESCRIPTORS: Plants (Botany), *Grasses, *Food, Preservation, *Dehydration, *Fats, Agriculture.

Plant Cultivation

Boceski, Dusko.
OBJECTIVE DETERMINATION OF THE DEGREE OF FERMENTATION OF ORIENTAL TOBACCOS. [1963] 8p.
Order from SLA $1.10 63-16617

Trans. of Duvan (Yugoslavia) 1961, v. 11, no. 6/7, p. 211-216.
Another trans. is available from K-H $10.00 as K-H-11627-b [1962] 8p.

DESCRIPTORS: *Tobacco, *Fermentation, Plants.

Ching, Ch'eng-k'uei.
CULTIVATION OF SEA KALE IN CHINA. 3 July 63, 13p. 16 refs. JPRS: 20013.
Order from OTS $0.50 63-31200

Trans. of mono. Sbornik Doklady na II Plenume Komissii po Rybokhozyaistvennomu Issledovaniyu Zapadnoi Chasti Tikhogo Okeana (Collection of Reports of the Second Plenary Session of the Commission on Fisheries Research in the Western Pacific Ocean, ed. by P. A. Moiseev) Moscow, 1962, p. 235-245.

DESCRIPTORS: Marine biology, *Plants (Botany), *Algae, Growth, Plankton, Marine biology, China.

Rusberg, Ernst.
PRODUCTION OF POTASSIUM FERTILIZER SALTS FROM CRUDE POTASSIUM SALTS BY FLOTATION. [1963] 18p. (5 figs. omitted) 71 refs.
Order from SLA $1.60 63-14626

Trans. of Chemie-Ingenieur-Technik (West Germany) 1955, v. 27, no. 1, p. 1-4.
Another trans. is available from K-H $22.50 as K-H 3424-b [1962] 18p.

DESCRIPTORS: *Fertilizers, Production, *Potassium compounds, Salts, *Flotation, Reagents, Machines, Manufacturing methods.

A state-of-the-art review.

Shmuk, A. A.
THE QUESTION CONCERNING THE ARTIFICIAL IMPROVEMENT OF THE QUALITY OF LOW-GRADE TOBACCOS. [1963] 34p.
Order from K-H $42.50 K-H 5389-c

Trans. of [Vsesoyuznyi Nauchno-Issledovatel'skii Institut Tabaka i Makhorki. Sbornik Nauchnoi Trudov] (USSR) 1931, v. 81, p. 4-18.

DESCRIPTORS: *Tobacco, Acceptability, Processing.

Telenga, N. A.
METHODS OF IMPROVING CHEMICAL PEST CONTROL IN DIRECTION OF PRESERVING USEFUL ENTOMOPHAGES. [1961] [9]p. 5 refs.
Order from OTS or SLA $1.10 61-23712

Trans. of [Ukrayins'kyi Naukovo-Doslidnyi Instytut Zakhystu Roslyn. Nauchnye Trudy] (USSR) 1959, v. 8, p. 5-15.

DESCRIPTORS: *Pest control, Chemicals, Insects, Preservation, *Insecticides, Pesticides.

Vol'fkovich, S. I. and Loginova, A.
COMPLEX PROCESS OF HYDROCHLORIC ACID TREATMENT OF APATITE. [1963] 28p. 17 refs.
Order from OTS or SLA $2.60 63-14640

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1944, v. 17, p. 381-393.
Another trans. is available from SLA as R-2149, 17p.

DESCRIPTORS: *Fertilizers, *Calcium compounds, *Phosphates, Production, *Apatite, Decomposition, *Hydrochloric acid, Fluorine, Rare earths, Phosphoric acids, Chemical precipitation, Manufacturing methods, Flotation.

As a result of experiments on the decomposition of apatite with HCl and subsequent stepwide precipitation of the fluorine, the rare earths and the phosphoric acid with limestone and NaCl, a material balance and technological scheme of the process were drawn up. (Author)

Woo, Chung-sung, Riu, Pin-tsiu, and Wang, Tao-siung.
STUDIES ON THE PREPARATION OF 2,4-D(2,4-DICHLOROPHENOXY-ACETIC ACID) AND ITS SODIUM SALT. 5 Apr 62 [16]p.
Order from SLA $1.60 63-14030

Trans. of [Hua Hsüeh] Taipei (Formosa) 1961, p. 1-11.

DESCRIPTORS: *Herbicides, Manufacturing methods, *Acetic acids, Chlorides, Phenoxy radicals, Synthesis (Chemistry), *Phenols, Dehydration, Chlorination, Distillation, *Sodium compounds, Acetates, Hydroxides, *Corrosion research, Stainless steel, Copper, Aluminum, Lead.

ASTRONOMY

Korol'kov, D. V., Pariiskii, Yu. N. and others.
RADIO ASTRONOMICAL OBSERVATIONS OF VENUS WITH HIGH RESOLVING POWER (Radioastronomicheskie Nablyudeniya Venery s Vysokoi Razreshayushchei Sposobnost'yu) tr. by A. Pingell. 1963, 7p. 9 refs.
N R L Trans. No. 936.
Order from OTS $0.50 63-11647

Trans. of Akademiya Nauk SSSR. Doklady, 1963, v. 149, no. 1, p. 65-67.

DESCRIPTORS: *Venus, *Radio astronomy, *Extraterrestrial radio waves, *Planets, Physical properties, Measurement, Astrophysics, Telescopes, Resolution.

During October-November of 1962 observations were carried out of the radio emission from Venus on 3.02 cm wavelength by means of a large Pulkovo radio telescope with a variable profile antenna. The purpose of these investigations was to evaluate the nature of the distribution of radio brightness, by using high resolving power and high precision of the coordinate measurements with a variable profile antenna. A divergence between the optical and radiomethods cannot be explained by the presence of high radiation belts as in the case with the Jupiter. Radio emission is practically absent at a distance of 1.07 $R_{\odot}$ from the center of the disk of the planet, i.e. the height of the radiation region does not exceed 420 km aboce the cloud cover of Venus. The results of measurements of the effective dimensions of Venus are shown. An attempt to determine the phase variations of radio temperature with displacement of the center of gravity of radio emission led to a negative result. The observations agree best of all with the model of a hot surface and cold atmosphere (Extracted).

BEHAVIORAL SCIENCES

Gendin, A. M.
TRENDS IN THE DEVELOPMENT OF THE COMMUNIST ATTITUDE TOWARD WORK. 28 June 63, 18p. JPRS: 19921.
Order from OTS $0.50 63-31146

Trans. of [Nauchnye Doklady Vysshei Shkoly]. Filosofskie Nauki (USSR) 1963, v. 6, no. 1, p. 151-159.

DESCRIPTORS: *Attitudes, *Labor, Industrial relations, Conferences, Communism.

A summary of a theoretical conference held in Krasnoyarsk.

Nyuberg, N. D.
RARE PHENOMENA "VISION" IN THE FINGERS OF ROSA KULESHOVA. 3 July 63, 18p. (photo. omitted) 4 refs. JPRS: 20012.
Order from OTS $0.50 63-31199

Trans. of Priroda (USSR) 1963 [v. 52] no. 5, p. 61-67.

DESCRIPTORS: *Reading, *Fingers, *Touch, *Colors, Perception, Light, *Vision.

A report concerning a young woman who learned how to read ordinary printed text while blindfolded, and to distinguish colors in total darkness.

Personnel and Training

Georgiev, Vladimir.
BIOGRAPHIC INFORMATION ON BULGARIAN ACADEMICIANS TODOR D. PAVLOV AND LYUBOMIR K. KRUSTANOV. 28 June 63, 5p. JPRS: 19954.
Order from OTS $0.50 63-31168

Partial trans. (excerpt) of Priroda (Bulgaria) 1963 [v. 12] no. 1, p. 4-6.

DESCRIPTORS: *Biographies, Scientific personnel, Meteorology, Political science.

Klyatskin, I. G. and Dement'ev, E. P.
TRAINING OF RADIO ENGINEERS [AND] ON WAYS AND MEANS OF IMPROVEMENT OF RADIO ENGINEERS' TRAINING. 2 July 63, 10p. JPRS: 19999.
Order from OTS $0.50 63-31189

Trans. of #Radiotekhnika (USSR) 1963, v. 18, no. 5, p. 66-71.

DESCRIPTORS: *Education, *Engineering personnel, Radio communication systems, Electronics, Electrical engineering, Training.

Petrov, E.
THE SOVIET COSMONAUTS (CONTINUATION). 10 July 63, 24p. JPRS: 20100.
Order from OTS $0.75 63-31243

Trans. from Krasnaya Zvezda (USSR) 1962, 15 Feb; 16 Mar; 22 Mar.

DESCRIPTORS: *Astronauts, Space flight, Scientific personnel.

BIOLOGICAL SCIENCES

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 228 (BIOLOGY AND MEDICINE SERIES). 28 June 63, 10p. JPRS: 19932.
Order from OTS $0.50 63-31157

Abstract trans. of Archiv für Experimentelle Veterinärmedizin (East Germany) 1963, v. 17, no. 2, p. 263-303, 305-313, 315-353, 355-369, 375-401, 403-417, 419-437, 439-497.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, *Veterinary medicine, Diseases, Communicable diseases, Drugs, Organic acids, Viruses Pathology, Phosphonic acids, Esters, Nematodes, Bacteria, Swine, Cattle

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 243 (BIOLOGY AND MEDICINE SERIES). 19 July 63, 30p. JPRS: 20243.
Order from OTS $1.00 63-31326

Consists of abstracts of articles from selected scientific and technical journals of Hungary and Poland.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, Neurology, Pathology, Antibiotics, Surgery, Gynecology, Children, Diseases, Drugs, Biochemistry, Immunity, Vitamins, Food, Genetics, Animals, Insects, Metabolism, *Veterinary medicine, Bacteria, Vaccines.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 79 (Biology and Biochemistry Series). 15 July 63, 58p. JPRS: 20162.
Order from OTS $1.75 63-31277

Trans. of selected abstracts from Referativnyi Zhurnal. Biologiya (USSR) 1962, no. 1-3, 6, 12, 18-19; 1963, no. 3; Referativnyi Zhurnal. [Khimiya]. Biologicheskaya Khimiya (USSR) 1963, no. 3.

DESCRIPTORS: *Biology, *Biochemistry, *Viruses, *Microorganisms, *Plants (Botany), Morphology, *Animals, *Soils, Trees, Physiology, Pharmacology, Age, Antibodies, Enzymes, Nutrition, Tissues (Biology), Bacteria, Growth, Organic acids, Bioelectronics, Radiation effects, Fertilizers, Parasites, Fishes, Cells (Biology), Growth substances, Veterinary medicine, Cereals, *Forestry (Biology).

USSR SCIENTIFIC ABSTRACTS: BIOLOGY AND MEDICINE NO. 1. 26 June 63, 105p. JPRS: 19878.
Order from OTS $2.50 63-31127

Consists of abstracts of articles from USSR scientific and technical journals.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, *Space medicine, Medical research, *Radiation effects, Pharmacology, Nuclear physics, Radiobiology.

Contents:
Aerospace medicine
Biological research
Medical research
Nuclear medicine
Pharmacology and toxicology.

Goldovskii, A. M.
ANABIOSIS AND THE GENERAL PROBLEM OF LIFE 2 July 63, 30p. 50 refs. JPRS: 19994.
Order from OTS $1.00 63-31184

Trans. of Zhurnal Obshchei Biologii (USSR) 1963, v. 24, no. 2, p. 81-97.

DESCRIPTORS: *Clinical death, Physiology, *Hibernation, Biology, Metabolism, Regeneration.

Organisms can exist not only in the ordinary state of life, but also in non-vital states. These latter are intermediate states (mesabiosis) between life and anabiosis, which are characterized by the one-side metabolism (only dissimilation), and anabiosis (biosis) which is characterized, in its turn, by the absence of metabolism and by insignificant destructive processes. The limits between the above cited states bear the character of sudden changes. In connection with the recognition of the possibility of non-vital states of organisms certain main principles of modern biology must be made more precised. The possibility of the temporary separation of dissimilation and assimilation together with the conservation of structures in unfunctioning state under anabiosis is principally important. This possibility of disintegration of the complicated phenomenon of life opens new ways for investigation of organisms which must lead to the more profound perception of the connection between assimilation and dissimilation, also of the unity between structure and function in the normal state of life. (Author)

Lebedev, V. D., Telitchenko, M. M., and Nikol'skii, G. V.
THE ACTIVITY OF THE SECTION OF HYDROBIOLOGY AND OF ICHTHYOLOGY OF THE MOSCOW SOCIETY OF NATURALISTS DURING THE SECOND HALF OF 1961 [AND] CHINESE RESEARCH IN HYDROBIOLOGY. 5 July 63, 6p. JPRS: 20039.
Order from OTS $0.50 63-31213

Trans. of Acta Hydrobiologica Sinica [sic] (USSR) 1955, no. 1, p. 56 and Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten'. Otdel Biologicheskii (USSR) 1962 [v. 37](67) [no. 3] p. 138-139.

DESCRIPTORS: Scientific research, *Fishes, *Marine biology, Aquatic animals, China.

Selivra, A. I., Dubinin, N. P., and Grosdova, T. Ya.
DEVELOPMENT OF "SPONTANEOUS" BIOELECTRICAL ACTIVITY OF THE SYMPATHETIC GANGLIA OF THE CAT DURING ONTOGENESIS [AND] STREPTOMYCIN, RADIATION, AND NATURAL MUTABILITY. 10 July 63, 12p. 25 refs. JPRS: 20118.
Order from OTS $0.50 63-31256

Trans. of Akademiya Nauk SSSR. Doklady, 1963, v. 148, no. 6, p. 1397-1399, 1425-1427.

DESCRIPTORS: *Bioelectronics, Autonomic nervous system, *Ganglia, *Cats, Growth, *Mutations, *Radiation effects, *Streptomycins, Genetics, Drosophilidae.

Zhigarev, A. and Iordanskii, A.
HUMAN REACTIONS IN SIMULATED SPACE ENVIRONMENT. 28 June 63, 4p. JPRS: 19953.
Order from OTS 63-31167

Trans. from Kommunist, Erevan (USSR) 1963, 14 June, p. 3.

DESCRIPTORS: *Reaction (Psychology), *Closed-cycle ecological systems, *Space medicine, Space biology, Nervous system, Space environmental conditions, Models (Simulations), Physiology.

Anatomy and Physiology

PROBLEMS OF HEMATOLOGY AND BLOOD TRANSFUSION, 1963, VOL. 8, NO. 4: [SELECTED] TRANSLATIONS. 22 July 63, 26p. 46 refs. JPRS: 20282.
Order from OTS $0.75 63-31346

Trans. of #Problemy Gematologii i Perelivaniya Krovi (USSR) 1963, v. 8, no. 4, p. 9-15, 19-22, 47-51.

DESCRIPTORS: *Hematology, *Blood transfusions, Metabolism, *Glucose, *Leukocytes, Leukemia, Cells (Biology), Autoradiography, *Nucleic acids, *Radiation sickness, *Bone marrow, *Freezing, Preservation, Transplantation.

Contents:
Paths of metabolic transportation of glucose in leukocytes of healthy people and of leukemia patients, by I. S. Luganova and I. F. Seits
Cytochemical and autoradiographic studies of nucleic acids in leukocytes, by L. I. Kazanova and G. I. Kozinets
Treatment of acute radiation sickness by fresh bone marrow and bone marrow preserved at low temperature (-196 C) by N. S. Pushkar'

PROBLEMS OF HEMATOLOGY AND BLOOD TRANSFUSION, 1963, VOL. 8, NO. 5: [SELECTED] TRANSLATIONS. 22 July 63, 99p. 160 refs. JPRS: 20297.
Order from OTS $2.50 63-31355

Trans. of #Problemy Gematologii i Perelivaniya Krovi (USSR) 1963, v. 8, no. 5, p. 3-37, 47-52.

DESCRIPTORS: *Hematology, *Blood transfusions, *Medicine, *Freezing, *Preservation, *Blood, *Bone marrow, Spleen, Morphology, *Skin, Temperature.

Contents:
Use of deep freezing for prolonged preservation of blood in a frozen state, by F. R. Vinograd-Finkel' and others
Freezing of bone marrow for preservation at low temperatures, by A. G. Fedotenkov and others
Effect of preservation of bone marrow and spleen by freezing in various media upon conservation of their morphology and protective biological properties, by V. A. Revis
Preserving skin by deep freezing, by Yu. Yu. Voronoi and others
Experience in employing various methods of preserving blood at plus and minus temperatures, by E. Dobri and others.
Method for preservation of blood at room temperature and results of its use in clinics, by N. N. Abezgauz and others.

Barbinov, V. A.
A SIMPLIFIED METHOD OF DETERMINING THE ERYTHROCYTE-PLASMA RATIO. [1962] [4]p. FASEB manuscript no. S 209-2.
Order from OTS or SLA $1.10 63-19004

Trans. of Laboratornoe Delo (USSR) 1962, v. 8, no. 7, p. 16-17.

DESCRIPTORS: *Blood plasma, *Erythrocytes, Hematology, Cells (Biology), *Blood counts.

The method described involves the use of a segment of the capillary tube from an ordinary Panchenkov's ESR apparatus and a special press, which is described in detail. Blood mixed with anticoagulant is drawn up into the capillary tube, which is then placed in the press. The press is placed in the holder of a centrifuge and the tube centrifuged until the packed erythrocytes give a constant volume. The results are read from divisions along the tube. The capillary tube may be filled with blood taken from the finger. The results obtained by use of the capillary tube were verified by analysis of blood taken from a vein utilizing 2 standard hematocrits and 2 capillary tubes. It was found that the difference between the results obtained by the hematocrits and capillary tubes did not exceed the variations between the results of parallel investigations with the 2 standard hematocrits.

Dregol'skaya, I. N.
THE EFFECT OF THE MAINTENANCE TEMPERATURE ON THE HEAT RESISTANCE OF HYDRAS AND THEIR CELLS. 28 June 63, 19p. 50 refs. JPRS: 19782.
Order from OTS $0.50 63-31087

Trans. of Tsitologiya (USSR) 1963, v. 5, no. 2, p. 194-203.

DESCRIPTORS: Temperature, *Adaptation (Physiology), Tolerances (Physiology), *Aquatic animals, *Cells (Biology), Marine biology.

A study was made of the heat resistance of digestive and interstitial cells, of the tentacles and intact organisms of four species of hydras: Hydra oligactis, H. vulgaris (ordinary and red forms), and Chlorohydra viridissima. The heat resistance level of the cells, like the heat resistance levels of the tentacles and intact hydras, depends on the ambient temperature in nature and under laboratory conditions. When the hydras are transferred from the warm to the cold the heat resistance of their cells changes, whereby the changes are of a phasic nature: after a rise, found after two hours, a reduction in heat resistance is observed, and then there is again a rise and a second fall, after which a new stable level of heat resistance of the cells is established (on the eighth day). When several species of hydras are kept under the same temperature conditions significant differences are demonstrated between them with respect to the heat resistance of cells, apparently connected with the temperature conditions under which the species live. (Author)

Gol'dburt, N. N.
HISTOTOPOGRAPHIC STUDY OF GASTROINTESTINAL ORGANS. [1962] [4]p. 5 refs. FASEB manuscript no. S 340-2.
Order from OTS or SLA $1.10 63-19025

Trans. of Arkhiv Patologii (USSR) 1962, v. 24, no. 4, p. 78-79.

DESCRIPTORS: *Gastrointestinal system, *Histology, Freezing, Stomach, Intestines, Gelatin, Leukocytes, Biological stains.

Goldmann's staining method was modified to examine large fragments of the walls of the stomach and intestine and the vermiform appendix. The tissues were mounted in gelatin and left for two days. Excess gelatin outside the specimen can be trimmed off before the specimen is cut on the freezing microtone. The gelatin on the sections does not interfere with microscopic examination or microphotography. Parallel hematoxylineosin staining was done of all the appendix and intestinal sections except when van Gieson's iron method and Kampas's silver method were used. Some notable features in the leukocyte distribution development of fatty tissue were revealed. Goldmann's method may also be applied to other hollow organs and to serous sheaths.

Klimova-Cherkasova, V. I.
CHANGES IN AUTONOMIC TONE AFTER STIMULATION AND INJURY OF VARIOUS BRAIN STEM SITES. [1962] [17]p. 20 refs. FASEB manuscript no. S 267-2.
Order from OTS or SLA $1.60 63-19020

Trans. of #Fiziologicheskii Zhurnal SSSR, 1962, v. 48, no. 7, p. 813-822.

DESCRIPTORS: *Autonomic nervous system, *Brain, *Hypothalamus, *Thalamus, Stimulation, Injuries, Heart, *Epinephrine, *Chlorpromazine,

Various regions of the brain were stimulated or injured to study the extent to which various levels of the reticular formation participate in the regulation of vagal tone in unanesthetized animals with species differences in the parasympathetic effects on the heart. Stimulation for 10 to 20 seconds of the hypothalamus and the mesencephalic reticular formation was followed by inhibition of cardiac and motor activity, and respiration. After stimulation of the thalamus, the medical lemniscus, and central gray, there was an increase in heart and respiratory rates and motor excitability. Epinephrine, given after stimulation of the midbrain reticular formation and hypothalamus, tended to intensify the motor reaction and increase excitability but did not affect the post-stimulation reaction to chlorpromazine which inhibited the thresholds, intensity, and duration of motor excitation. The tone of the parasympathetic innervation of the heart increased after stimulation of the midbrain reticular formation, and decreased after stimulation of the thalmic reticular formation. The opposite results were obtained after injury. Analysis showed that autonomic reactions occurred after stimulation because of changes in the vagal tone. The trend of the changes was the same for both cats and rabbits according to the site of stimulation or injury.

Koblov, G. A.
A PECULIAR DIVISION OF THE NERVE CELLS OF CERTAIN AUTONOMIC GANGLIA OF THE CAT. [1962] [33]p. 5 refs. FASEB manuscript no. S 338-2.
Order from OTS or SLA $3.60 63-19023

Trans. of Arkhiv Anatomii, Gistologii i Embriologii (USSR) 1962, v. 42, no. 2, p. 83-93.

DESCRIPTORS: *Nerve cells, Histology, *Ganglia, *Autonomic nervous system, Cats, Morphology.

Studies were made at various seasons and days of the ganglia of the solar plexus, the superior and inferior mesenteric, stellate and superior cervical ganglia of 90 cats. A great diversity of forms in each stage was observed. At first two regions of cytoplasm are formed in the neuron, one differentiated and the other undifferentiated. The nucleus becomes more compact and basophilic, and smaller, or is often elongated. After the nuclear membrane disappears, the chromosomes move into the bright undifferentiated cytoplasm which is surrounded by basophilic differentiated cytoplasm, and then separate. Then the chromosomes extend into long threads, consolidate into separate groups, or in a majority of cases into a single common massive cord. At various moments of separation, the chromosomal figures form and emerge beyond the boundary of the original cell body. The two groups of chromosomes thus formed are then incorporated into the daughter nuclei. Plasmotomy precedes the division of the original cell into two: a small undifferentiated cell (of the neuroblast type) and a large differentiated cell, formed out of the main mass of the original cell.

Marshak, M. E.
MATERIALS ON THE FUNCTIONAL ORGANIZATION OF THE RESPIRATORY CENTER. [1962] [18]p. 13 refs. FASEB manuscript no. S 116-2.
Order from OTS or SLA $1.60 63-15992

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1962, v. 17, no. 8, p. 16-22.

DESCRIPTORS: Physiology, *Respiratory system, Nervous system, Brain, *Hypoxia, Oxygen consumption, *Hypercapnia, *Sensory mechanisms, Carbon dioxide, Oxygen poisoning.

Experimental data on the laws that govern the structure and functional activities of the respiratory center are presented. Electrical recordings of the activity of the respiratory muscles and nerves of cats and human subjects during hypoxia, hypercapnia and hyperventilation were made. To obtain satisfactory recordings, human subjects were trained to breathe against imposed additional resistance. The recordings indicated that a number of neural mechanisms take part in the modulation of the spontaneous activity of the inspiratory center and in maintaining the normal reciprocal relations between the inspiratory and expiratory centers. Hypocapnia disturbed the reciprocal relations between these centers and the rhythmic alternation of the phases of the respiratory cycle. The author concludes: (1) That the neural mechanisms that maintain the alternation of the respiratory cycle depend upon the CO_2 pressure in the arterial blood. (2) That the connections between the neural mechanisms and the internal environment of the body tissues are important factors in functional organization of the respiratory center.

Mchedlishvili, G. I.
"CHEST-HEAD" PREPARATION FOR INVESTIGATION OF CEREBRAL CIRCULATION (Preparat "Grudnaya Kletka-Golova" dlya Issledovaniya Mozgovogo Krovoobrashcheniya). [1963] [5]p. 11 refs. NIH no. 1-52-63.
Order from OTS or SLA $1.10 63-15667

Trans. of #Byull[eten'] Eksper[imental'noi] Biol[ogii i] Med[itsiny] (USSR) 1962, v. 53, no. 2, p. 123-125.

DESCRIPTORS: *Thorax, *Head, Medical research, *Blood circulation, *Brain, Nervous system, Arteries, Blood pressure, Abdomen, Extremities.

The author developed a "chest-head" preparation, in which blood circulation is effected only in the area of the chest, neck and head, whereas the circulatory system of the abdominal cavity and extremities was excluded. Due to the compensator the systemic blood pressure may be well stabilized in various effects. The preparation may be successfully used for investigating the intrinsic mechanisms of the cerebral circulation control. It was a number of advantages over the preparation recently described by Dozio ("heart-lung-head"). (Author)

Perel'man, E. L. and Sultanov, F. F.
THE EFFECT OF ASCORBIC ACID ON THE FUNCTION OF THE SUPRARENAL GLANDS UNDER THE INFLUENCE OF HIGH AMBIENT TEMPERATURE. 3 July 63, 5p. JPRS: 20011.
Order from OTS $0.50 63-31198

Trans. of Zdravookhranenie Turkmenistana (USSR) 1963, v. 7, no. 4, p. 3-6.

DESCRIPTORS: *Ascorbic acid, Physiology, *Adrenal glands, Temperature, *Tolerances (Physiology), Adaptation (Physiology), *Heat tolerance.

A study was made of the reaction of the suprarenal glands under the influence of high temperature against the background of a single and repeated injections of ascorbic acid into white rats. (Author)

Taranenko, A. G.
THE EFFECT OF THYROID GLAND ON THE CASEIN CONTENT OF THE MILK AND ON ITS AMINO ACID COMPOSITION. [1962] [13]p. 14 refs. FASEB manuscript no. S 243-2.
Order from OTS or SLA $1.60 63-19011

Trans. of #Fiziologicheskii Zhurnal SSSR, 1962, v. 48, no. 6, p. 742-747.

DESCRIPTORS: *Thyroid gland, *Casein, *Milk, *Amino acids, Fats, *Mammary glands, Iodine, *Diet.

Experiments were performed on 5 lactating goats to determine the effect of thyroid hormone thyroxin and of efferent inervation of the mammary gland on the content of fat and casein in milk and on the amino-acid composition of casein. The goats were fed iodinated casein which resulted in an increased fat content and a decreased casein content. With cessation of iodinated-casein feeding, the normal activity of both glands was restored after a few days. A loss in live weight occurred in those animals fed with iodinated casein. Further experiments revealed that denervated and intact mammary glands secreted milk with identical fat and casein contents before iodinated-casein feeding; during feeding the fat content in milk from both glands increased and that of casein decreased, while the relative proportions of the amino acids in the casein were unaltered. Denervation did not change the effect of

iodinated casein on the synthesis of milk fat and casein; the mammary gland may have a well developed compensatory function. Casein content may be increased by influencing the functional activity of the thyroid gland.

Veselinov, M., Gyuzelev, L., and Georgiev, Sv.
THE APPLICATION OF THE TOBACCO DEGUSTATION METHOD. [1962].
Order from K-H $26.25 K-H 10825

Trans. of Bulgarski Tyutun, 1960 [v. 5] no. 9/10 [p. 429-439].

DESCRIPTORS: *Tobacco, *Taste, Sensory perception, Chemoreceptors.

Biochemistry

DOKLADY, BIOCHEMISTRY SECTION (DOKLADY AKADEMII NAUK SSSR) 1958-61, VOLS. 118-141. 1958-June 62, 24 nos.
Order from OTS or SLA

Partial trans. (Biochemistry sections) of Akademiya Nauk SSSR. Doklady, 1958-61, v. 118-141.

DESCRIPTORS: *Biochemistry.

v. 118, 63p. $6.60, 63-23428-118
v. 119, 43p. $4.60, 63-23428-119
v. 120, 61p. $6.60, 63-23428-120
v. 121, 31p. $3.60, 63-23428-121
v. 122, 76p. $7.60, 63-23428-122
v. 123, 45p. $4.60, 63-23428-123
v. 124, 80p. $7.60, 63-23428-124
v. 125, 60p. $5.60, 63-23428-125
v. 126, 62p. $6.60, 63-23428-126
v. 127, 53p. $5.60, 63-23428-127
v. 128, 33p. $3.60, 63-23428-128
v. 129, 58p. $5.60, 63-23428-129
v. 130, 40p. $3.60, 63-23428-130
v. 131, 76p. $7.60, 63-23428-131
v. 132, 43p. $4.60, 63-23428-132
v. 133, 53p. $5.60, 63-23428-133
v. 134, 64p. $6.60, 63-23428-134
v. 135, 65p. $6.60, 63-23428-135
v. 136, 39p. $3.60, 63-23428-136
v. 137, 51p. $5.60, 63-23428-137
v. 138, 58p. $5.60, 63-23428-138
v. 139, 28p. $2.60, 63-23428-139
v. 140, 53p. $5.60, 63-23428-140
v. 141, 76p. $7.60, 63-23428-141

Boulanger, Paul and Osteux, Roger.
CONSIDERATIONS ON THE DETERMINATION OF GLUTAMIC ACID AND GLUTAMINE IN BIOLOGICAL MEDIA BY BACTERIAL DECARBOXYLASE. [1963] 6p. (refs. omitted).
Order from SLA $1.10 63-14550

Trans. of Soc[iété de] Chim[ie] Biol[ogique]. Bull[etin] (France) 1949, v. 31, p. 1297-1300.

DESCRIPTORS: Chemical analysis, *Glutamic acid, Culture media, *Bacteria, Clostridium perfringens, *Glutamine, *Carboxylase.

The determination of l-glutamic acid by the bacterial decarboxylase of Clostridium welchii according to Gale's method can be disturbed by the intervention of a pyruvodecarboxylase in an atmosphere of nitrogen. This action is almost completely inhibited by oxygen and totally by M/5 sodium fluoride, which on the contrary is without action on glutamo-decarboxylase and glutaminase. This selective inhibition makes it possible to maintain, for determinations carried out in complex biological media, the original conditions recommended by Gale and to retain their advantages. (Author)

Dorner, G. and Fischer, F. W.
ABOUT THE INFLUENCE OF THE HEXANICOTINIC ACID ESTER OF THE M - INOSITOL ON THE SERUMLIPIDS AND SERUMLIPOPROTEINES (Zur Beeinflussung der Serumlipide und -Liporpoteine durch den Hexanicotinsäureester des m-Inositol). [1963] 7p. (refs. omitted).
Order from SLA $1.10 63-14768

Trans. of Arzneimittel-Forschung (West Germany) 1961, v. 11, p. 110-113.

DESCRIPTORS: *Nicotinic acid, *Esters, *Lipids, *Lipoproteins, Blood serum, Cholesterol, Phospholipids.

The influence of m-inositol hexanicotinate ester on the serum lipids and -lipoproteins is reviewed. The mean values of serum cholesterol were found reduced following a dose of 200 mgs 3 or 4 times per day 4 weeks after the beginning of the therapy. Statistical significance of the reduction was obtained after 12 weeks treatment. Most marked and statistically significant influence was observed on the β-lipoid fractions of cholesterol and lecithin. No side-effects whatever were observed in any of the cases treated. (Author)

Frisman, E. V., Yanovskaya, N. K. and others.
FLOW BIREFRINGENCE OF MACROMOLECULAR RNA SOLUTIONS. [1962] [7]p. 11 refs. FASEB manuscript no. S 127-2.
Order from OTS or SLA $1.10 63-15994
Figs. available on loan from OTS

Trans. of Tsitologiya (USSR) 1962, v. 4, no. 3, p. 323-325.

DESCRIPTORS: Fluid flow, *Molecular structure, *Ribonucleic acids, *Refraction, *Polymers, Biophysics,

The prelimenary results of the study of the flow birefringence of macromolecular RNA (ribonucleic acid) solutions are described. The RNA was isolated from a transplantable mucous carcinoma of the liver. An optical apparatus with a half-shaded condenser was used for studying the flow birefringence of the RNA solutions. The measurements were done in a flow optimenter. The interval between velocity gradients used corresponded to the laminary flow. The relative viscosity of the solutions was measured in a capillary viscosimeter. The concentration of the RNA solutions was determined

from their absorption in the ultraviolet region after hydrolysis with 0.5 $HClO_4$. All the investigations were conducted at 21°C. The author found that the flow birefringence of the polymer solutions was due to the optical anisotropy of the macromolecules and was dependent upon the microstructure of the chain (true anisotropy). He concludes that the true anisotropy of the RNA molecule does not differ greatly from the anisotropy of the molecules of flexible polymers.

Georgiev, G. P. and Mant'eva, V. L.
ON THE EXISTENCE OF AU-TYPE RIBONUCLEIC ACID IN THE NUCLEOLO-CHROMOSOMAL SYSTEM
28 Jan 63 [3]p. 13 refs. NIH no. 1-49-63.
Order from OTS or SLA $1.10 63-15668

Trans. of Voprosy Meditsinskoi Khimii (USSR) 1962, v. 8, no. 4, p. 93-94.

DESCRIPTORS: *Ribonucleic acids, *Chromosomes, Nucleotides, *Nucleic acids, Cytochemistry, *Desoxyribonucleic acids, *Nuclei (Biology).

Guggenheim, N.
BETAINE AND ω-AMINO ACIDS. [1963] 83p. 314 refs.
Order from SLA $8.10 63-14613

Trans. of mono. die Biogenen Amine (Biological Amines) [3d ed.] 1940, chap. 4, p. 171-210.

DESCRIPTORS: Biological products, *Amino acids, *Alkaloids, *Betaine compounds, Glycines, Ornithine, Histidine, Thio radicals, Tryptophan, *Prolines, *Nicotinic acid, Amides, *Pyridine derivatives, Fatty acids, Crotonic acid, Propionic acid, Metabolism, Enzymes, *Pharmacology, Salts, Chemical properties, Biosynthesis.

Hillmann, Günther and Elies, Anneliese.
A SIMPLIFIED RESOLUTION OF RACEMIC D, L-GLUTAMIC ACID. [1963] 8p. 12 refs.
Order from SLA $1.10 63-14564

Trans. of [Hoppe-Seyler's] Z[eitschrift für] Physiol[ogische] Chem[ie] (West Germany) 1948, v. 283, p. 31-34.

DESCRIPTORS: *Stereochemistry, *Amino acids, *Glutamic acid, Racemazation, Separation, Hydrogen compounds, Chlorides, Pyrrolidinone, Carboxylic acids, Quinine.

Karyakin, A. V., Kutyurin, V. M., and Chibisov, A. K.
THE STATE OF WATER IN THE CHLOROPHYL MOLECULE. [1963] 4p. 12 refs.
Order from OTS or SLA $1.10 63-16723

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1961, v. 140 [no. 6] p. 1321-1323.

DESCRIPTORS: *Plant pigments, *Chlorophylls, Water, *Chemical bonds, Spectra (Infrared), Absorption spectrum.

Khaustova, I. M. and Ugleva, A. I.
PURIFICATION AND SEPARATION OF CLOSTRIDIUM PEREFRINGENS TOXINS AND TOXOIDS. [1962] [9]p. 5 refs. FASEB manuscript no. S 97-2.
Order from OTS or SLA $1.10 63-15983

Trans. of Voprosy Meditsinskoi Khimii (USSR) 1962, v. 8, no. 3, p. 276-279.

DESCRIPTORS: Purification, Separation, *Clostridium perfringens, *Toxins and antitoxins, Sodium compounds, Phosphates, Bacterial toxins, Antigens.

A study was made of the effect of the pH and temperature on purification of Clostridium perfringens toxin by sodium hexametaphosphate. The highest yield of antigen and the greatest specific activity were obtained when the toxin was acidified to pH 3.2 at 3°C and the precipitate separated 30 minutes after acidification. Experiments with various acids showed that the best yield of antigen occurred after acidification with 1N sulfuric acid. Precipitations with sodium hexametaphosphate at pH 3.2 gave purified and concentrated toxins with a mean antigen yield of 53±7%, a mean toxoid yield of 70±18%, and a mean specific activity of 620±150 and 700±275 complement units per mg of total nitrogen, respectively. The toxins and toxoids obtained were faintly colored.

Krasnovskii, A. A. and Drozdova, N. N.
REVERSIBLE PHOTOCHEMICAL REDUCTION OF POLYMETHENE DYES. [1963] 4p. 7 refs.
Order from OTS or SLA $1.10 63-16724

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1962, v. 145 [no. 1] p. 129-132.

DESCRIPTORS: *Photochemistry, *Dyes, *Cycloalkanes, *Plant pigments, *Chlorophylls, Sensitivity, Reduction (Chemistry), Ascorbic acid, *Cysteine, Spectra (Infrared), Absorption spectrum.

In studying the effect of polyene compounds on the reversible photochemical reduction reaction of chlorophyll by ascorbic acid, it was found that certain polymethene dyes underwent photosensitized reduction. These observations pointed to the possibility of direct photoreduction of dyes of this class. Conditions were found under which reversible photoreduction of these compounds by ascorbic acid and cysteine and the occurrence of photosensitized reduction of the azo dye methyl red could be observed. The results obtained indicate that the photosensitizing action of such dyes in solution (just as in the case of chlorophyll and its analogs is connected with their capacity for the reversible photoreduction reaction. (Author)

Medvedev, Zh. A.
REPRODUCTION AND TRANSMISSION OF INFORMATION DURING THE SYNTHESIS OF BIOLOGICAL MACROMOLECULES. [1962] 22p. ([Eng.] refs. omitted) 8 refs.
Order from OTS or SLA $2.60 AEC-tr-4903

Trans. of Vsesoyuznoe Khimicheskoe Obshchestvo. Zhurnal (USSR) 1961, v. 6, no. 3, p. 268-275.

DESCRIPTORS: Reproduction (Physiology), Synthesis, Molecules, Biology, Biochemistry, *Proteins, *Genetics, Nucleic acids, Growth, *Amino acids, Hormones, *Evolution.

We examined a few of the problems in using the principles of the information theory in an analysis of the uniformities of biochemical processes. If the problem is examined from an evolutionary point of view, it it becomes obvious that if we encounter in non-living nature, phenomena of exchange of substances, mutual-effect processes, catalysis, etc., then the transfer and coding of information appear phylogenetically only in living systems and constitute the basis for the biological form of movement of matter. Apparently, it is not sufficiently recognized that the exchange of substances and self-creation are basic indices of living matter. (Author)

Perini, Elio.
PROCEDURE AND EQUIPMENT TO OBTAIN AN ALEURONIC EXTRACT FROM THE PERISPERM OF SEEDS AND CEREALS, PARTICULARLY OF GRAINS AND PRODUCTS, OBTAINED WITH SUCH PROCEDURES. [1963] [13]p.
Order from OTS or SLA $1.60 63-14790

Trans. of Italian patent 546, 404, appl. 18 Oct 54, granted 20 July 56.

DESCRIPTORS: *Cereals, *Seeds, Plant (Botany), Biochemistry, Biological products.

The purpose of the invention is to provoque artificially the secretion of the active substances of the aleuronic (granules) cells, to hinder the consequent activity of this substance and to extract it in a preservable manner. It was found moreover, that the beforementioned substances are insulated unlike the enzymes, which are thermostabile. According to the invention the bran is left in the presence of water and in absence of attinic rays, of which the granules contained in the aleuronic cells, have caused an initial secretion; the bran mixture and water is then heated at a higher temperature than the one at which the enzymes were destroyed and the liquid part separates from the mixture containing the active substances. (Author)

Quilico, A., Cardani, C., and Piozzi, F.
THE STRUCTURE OF ECHINULIN (Sulla Struttura dell'-Echinulina) tr. by D. A. Sinclair. 1963, 9p. 6 refs. NRCC Technical Trans. 1077.
Order from NRCC $0.50 NRCC C-4459

Trans. of Accad[emia] Naz[ionale dei] Lincei. Classe [di] Sci[enze] Fiz[iche] Mat[ematiche e] Nat[urali]. Rend[iconti] (Italy) 1954 [ser. 8] v. 17, p. 315-322.

DESCRIPTORS: *Fungi, *Biological products, *Molecular structure, Determination, Chemical bonds.

Slobodskaya, V. P. and Pasynskii, A. G.
CONCENTRATION DEPENDENCE OF ACTIVITY OF FERMENTS IN CONNECTION WITH THEIR BEHAVIOR IN COACERVATES, tr. by Sergey Shewchuck. [1962] 8p. 7 refs.
Order from OTS or SLA $1.10 UCRL Trans-696

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 137 [no. 3] p. 715-718.

DESCRIPTORS: *Enzymes, *Colloids, Particles, Liquids, Hydrolysis, *Glycoside hydrolases, *Peroxidase, Chemical reactions.

A study of the activity of two enzymes: β-amylase and peroxidase in an interval of concentrations of 50 to 100-fold.

Botany

DOKLADY, BOTANICAL SCIENCES SECTIONS (DOKLADY AKADEMII NAUK SSSR) 1957-61, VOLS. 112-141. 1957-June 62, 31 nos.
Order from OTS or SLA

Partial trans. (Botanical Sciences sections) of Akademiya Nauk SSSR. Doklady, 1957-61, v. 112-141.

DESCRIPTORS: *Plants (Botany).

v. 112, 44p. $4.60, 63-23427-112
v. 113, 58p. $5.60, 63-23427-113
v. 114, 25p. $2.60, 63-23427-114
v. 115, 64p. $6.60, 63-23427-115
v. 116, 62p. $6.60, 63-23427-116
v. 117, 84p. $8.10, 63-23427-117
Index v. 112-117, 12p. $1.60, 63-23427-Index(112-117)
v. 118, 56p. $5.60, 63-23427-118
v. 119, 83p. $8.10, 63-23427-119
v. 120, 64p. $6.60, 63-23427-120
v. 121, 55p. $5.60, 63-23427-121
v. 122, 40p. $3.60, 63-23427-122
v. 123, 37p. $3.60, 63-23427-123
v. 124, 80p. $7.60, 63-23427-124
v. 125, 55p. $5.60, 63-23427-125
v. 126, 73p. $7.60, 63-23427-126
v. 127, 56p. $5.60, 63-23427-127
v. 128, 37p. $3.60, 63-23427-128
v. 129, 63p. $6.60, 63-23427-129
v. 130, 72p. $7.60, 63-23427-130
v. 131, 42p. $4.60, 63-23427-131
v. 132, 23p. $2.60, 63-23427-132
v. 133, 60p. $5.60, 63-23427-133
v. 134, 60p. $5.60, 63-23427-134
v. 135, 69p. $6.60, 63-23427-135
v. 136, 54p. $5.60, 63-23427-136
v. 137, 55p. $5.60, 63-23427-137
v. 138, 37p. $3.60, 63-23427-138
v. 139, 35p. $3.60, 63-23427-139
v. 140, 27p. $2.60, 63-23427-140
v. 141, 61p. $6.60, 63-23427-141

Jung, Ch'en.
THE FOREST PLANT GEOGRAPHY OF CHINA, VOLS. 1-2. 27 June 63, 97p. 20 refs. JPRS: 19892.
Order from OTS $2.25 63-31137

Trans. of mono. Chung Kuo Sen Lin Chih Wu Ti Li Hsüeh, Peiping, 1960, 99p.

DESCRIPTORS: *Plants (Botany), *Trees, *China, *Taxonomy, Distribution, *Forestry, Ecology.

The first volume describes the forest plant system of China from the viewpoint of the science of plant taxonomy. In this volume we attempt to clarify the distribution of forest plants in China in relation to all the other places of the world, and to explain the historical and other reasons of the present phenomenon of botanic description. Finally, a description of the general characteristics of the Chinese botanic system was given. The second volume describes the forest plant communities of China from the viewpoint of the science of plant ecology. In this volume, the Chinese botanic system is divided into horizontal and vertical zones according to latitude and elevation. Thus, based upon strong evidence we have gathered, an attempt is made here to reconstruct and surmise the original appearance of the primary forests of each of the zones, and to discuss the changes that occurred. Finally, in consideration of future forestation plans, the condition of growth of many transplanted species was investigated. (Author)

Lazarevskii, M. A.
ON METHODS OF SELECTING VINE-PLANT CLONES (O Metodakh Klonovoi Selektsii Vinograda) tr. by V. A. Solodukhin. [1963] [13]p. (foreign text included) 2 refs. CSIRO Trans. no. 5907.
Order from OTS or SLA $1.60 63-19150

Trans. of Vinodelie i Vinogradarstvo SSSR, 1956 [v. 16] no. 8, p. 27-31.

DESCRIPTORS: Selection, *Plants (Botany), *Fruits, Reproduction (Physiology), Genetics.

Pobedinskii, A. V.
ALPINE FORESTS OF SOUTHWEST CHINA. 9 July 63, 17p. JPRS: 20085.
Order from OTS $0.50 63-31237

Trans. of [Akademiya Nauk SSSR]. Institut Lesa i Drevesiny [Krasnoyarsk]. Trudy, 1961, v. 56, p. 89-103.

DESCRIPTORS: *Forestry, *Trees, *China, *Plants (Botany).

Serenkov, G. P.
NUCLEIC ACIDS AND EVOLUTION IN ALGAE. 6 May 63 [20]p. 27 refs. FTD-TT-63-421.
Order from OTS $0.50 63-11660

Unedited rough draft trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1962 [v. 27] no. 6, p. 857-868.

DESCRIPTORS: *Algae, *Evolution, *Biochemistry, Chemical analysis, *Nucleic acids, Desoxyribonucleic acids, Ribonucleic acids, *Nucleotides, *Nitrogen, Phosphorus

Analyses were undertaken in an effort to correlate the characteristic nucleic acid compositions of algae groups with their intra-divisional evolutionary positions. Data are given for many species, particularly those of the Chlorophyta, concerning the content of total nitrogen, phosphorus, and nucleic acids; as well as the relative content of nucleotides and nucleotide combinations in the DNA and RNA.

Vendt, V. P. and Drokova, I. G.
RIBONUCLEIC ACID AS A STIMULATOR OF ALGAE GROWTH. 25 Mar 63 [7]p. 13 refs. FTD-TT-63-291.
Order from OTS or SLA $1.10 63-19331

Unedited rough draft trans. of Ukrayins'kyi Botanichnyi Zhurnal (USSR) 1962, v. 19, no. 6, p. 60-63.

DESCRIPTORS: *Ribonucleic acids, *Algae, Growth substances, Growth, *Stimulation (Physiology), Culture media.

Additional introduction into the culture medium of a low polymeric solution of ribonucleinic acid leads to considerable stimulation of the growth and concentration of biomass of Chlorella pyrenoidosa Chick, Scenedesmus quadricauda (Turp.)Breb, and Dunaliella salina Teod algae. (Author)

Zlataric, B.
THE EFFECT OF VARYING THE PHOTOPERIOD WITH THE WHITE MULBERRY, THE BLACK LOCUST, AND TWO PROVENANCES OF THE AUSTRIAN PINE (Efekti Promjene Fotoperiodizma kod Bijelog Duda, Bagrema i Dve Provenijencije Crnog Bora) tr. by Mladen Engelsfeld. 1963 [14]p. 9 refs. PL-480 Agr.
Order from OTS $0.50 60-21635

Trans. of Sumarski List (Yugoslavia) 1952, v. 76 [no. 7] p. 229-239.

DESCRIPTORS: *Photoperiodism, Plants (Botany), Pine, Rhythm (Biology), *Trees, Growth.

Medical Specialties and Equipment

PHYSICAL THERAPY. 17 July 63, 44p. 35 refs. JPRS: 20204.
Order from OTS $1.25 63-31304

Trans. of Voprosy Kurortologii, Fizioterapii i Lechebnoi Fizicheskoi Kul'tury (USSR) 1963 [v. 28] no. 2, p. 97-104, 135-139, 173-175, 177-178, 184-191.

DESCRIPTORS: *Therapy, *Air, Ionization, Ions, *Atmosphere, *Health resorts, Public health, Stimulation, Skin, Electric currents, Dosage, Dosimeters.

Contents:
Combined and successive use of physiotherapeutic effects, by N. A. Kaplun and A. N. Obrosov
The effect of moderately increased doses of positive aeroions on the healthy person, by A. D. Egorov and others
The dosimetry of ion therapy, by A. P. Shusyakov
E. A. Chernyavskii's physico-chemical conception of atmospheric ionization, by S. N. Finogenov
Therapeutic Properties of Ionized Air, by A. A. Minkh: review of mono. "Lechebnye Svoistva Ionizirovannogo Vozdukha", by S. N. Finogenov, Kiev, 1961, 80p.
All-Union Conference on Experimental Health Resort Science and Physiotherapy, Yalta, Sep 62, by V. G. Boksha and others.

SOVIET MEDICAL RESEARCH. 6 Mar 62 [10]p. 4 refs. JPRS: 12898.
Order from OTS or SLA $1.10 62-23459

Trans. of #Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1961, v. 11, no. 6, p. 1134-1136; Yunyi Tekhnik (USSR) 1961, v. 5, no. 3, p. 25-28.

DESCRIPTORS: *Electronic equipment, Medicine, *Bioelectronics, Automation, Programming (Computers), *Neuromuscular transmission, Cybernetics, Bionics, *Speech, *Medical research.

Contents:
Programmed electronic device for the automation of experiments for elaborating temporary connections, by M. Yu. Ul'yanov and N. M. Kobyakov
Machine and speech, by D. Iordanskii.

Microbiology

FLUORESCENT ANTIBODY RESEARCH ON INFLUENZA AND RICKETTSIAL DISEASES. 17 July 63, 17p. 19 refs. JPRS: 20211.
Order from OTS $0.50 63-31308

Trans. of #Voprosy Virologii (USSR) 1961, v. 6, no. 6, p. 656-668.

DESCRIPTORS: *Fluorescence, *Antibodies, *Influenza viruses, *Rickettsia, *Antigens, Reproduction (Physiology), Cells (Biology), Infections, *Ticks.

Contents:
The use of the fluorescent antibody method for the study of the localization of influenza and para-influenza virus antigens during their multiplication in cells, by V. D. Lotte and F. M. Kirillova
Study of experimental rickettsial diseases by the fluorescent antibody method. III.
Study of ticks for infection with R. burneti, by N. I. Amosenkova and others.

JOURNAL OF MICROBIOLOGY, EPIDEMIOLOGY, AND IMMUNOBIOLOGY, 1963, NO. 4: [SELECTED] TRANSLATIONS. 22 July 63, 30p. 51 refs. JPRS: 20299.
Order from OTS $1.00 63-31357

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1963, no. 4, p. 46-49, 57-71.

DESCRIPTORS: *Microorganisms, *Epidemiology, *Immunology, *Bacteria, Aerosols, Viability, Phagocytosis, *Respiratory system, *Vaccines, Morphology, *Inhalation immunization, *Reticuloendothelial system, Culture media, *Plague, Laboratory animals, *Zoonoses.

Contents:
The viability of bacteria in an aerosol, by V. V. Vlodavets
Anatomo-physiological characteristics of the human and animal respiratory systems following the aerosol method of vaccination. I. The role of the structure of the aeriferous passages in the mechanical retention of inhaled material, by Yu. S. Pisarevskii
Phagocytosis capability in the cellular elements of a macrophage culture in vitro, II, by N. N. Ginsburg and T. N. Maslova
The search for effective chemical vaccines against certain zoonoses. III. The development of a plague chemical vaccine and testing of it in experiments on animals, by N. I. Aleksandrov and others.

MICROBIOLOGY, 1957, VOL. 26, NOS. 1-6 AND INDEX. 1957-58, 6 nos.
Order from OTS or SLA

Trans. of Mikrobiologiya (USSR) 1957, v. 26, nos. 1-6.

DESCRIPTORS: *Microorganisms.

no. 1, 144p. $11.00, 63-23153-1
no. 2, 121p. $10.10, 63-23153-2
no. 3, 153p. $11.50, 63-23153-3
no. 4, 107p. $9.10, 63-23153-4
no. 5, 105p. $9.10, 63-23153-5
no. 6, 157p. $11.50, 63-23153-6
(includes index)

MICROBIOLOGY, 1958, VOL. 27, NOS. 1-6. 1958-59, 6 nos.
Order from OTS or SLA

Trans. of Mikrobiologiya (USSR) 1958, v. 27, nos. 1-6.

DESCRIPTORS: *Microorganisms.

no. 1, 154p. $11.50, 63-23154-1
no. 2, 134p. $10.50, 63-23154-2
no. 3, 132p. $10.50, 63-23154-3
no. 4, 134p. $10.50, 63-23154-4
no. 5, 140p. $10.50, 63-23154-5
no. 6, 120p. $9.60, 63-23154-6

MICROBIOLOGY, 1959-61, VOLS. 28-30. 1959-June 62, 16 nos.
Order from OTS or SLA

Trans. of Mikrobiologiya (USSR) 1959-61, v. 28-30.

DESCRIPTORS: *Microorganisms.

v. 28, no. 1, 160p. $11.50, 63-23154-(28/1)
v. 28, no. 2, 157p. $11.50, 63-23154-(28/2)
v. 28, no. 3, 152p. $11.50, 63-23154-(28/3)
v. 28, no. 4, 151p. $11.50, 63-23154-(28/4)
v. 29, no. 1, 126p. $10.10, 63-23154-(29/1)
v. 29, no. 2, 114p. $9.60, 63-23154-(29/2)
v. 29, no. 3, 120p. $9.60, 63-23154-(29/3)
v. 29, no. 4, 119p. $9.60, 63-23154-(29/4)
v. 29, no. 5, 118p. $9.60, 63-23154-(29/5)
v. 29, no. 6, 133p. $10.50, 63-23154-(29/6)
v. 30, no. 1, 189p. $13.00, 63-23154-(30/1)
v. 30, no. 2, 162p. $12.00, 63-23154-(30/2)
v. 30, no. 3, 158p. $11.50, 63-23154-(30/3)
v. 30, no. 4, 164p. $12.00, 63-23154-(30/4)
v. 30, no. 5, 152p. $11.50, 63-23154-(30/5)
v. 30, no. 6, 163p. $12.00, 63-23154-(30/6)

MICROBIOLOGY, 1962, VOL. 31, NO. 1: [SELECTED] TRANSLATIONS. 28 June 63, 17p. 30 refs. JPRS: 19928.
Order from OTS $0.50 63-31153

Trans. of #Mikrobiologiya (USSR) 1962, v. 31, no. 1, p. 111-120, 189-191.

DESCRIPTORS: *Microorganisms, *Biology, Plants (Botany), Microstructure, Fluorescence, Microscopy, Soils, Algae.

Contents:
Study of rhizosphere microflora using fluorescent microscopy in reflected light, by D. G. Zvyagintsev
Seasonal dynamics of soil algae in relation to plant cover, by P. M. Potul'nitskii
Maksim Nikolaevich Meisel' (60th birthday).

THE USE OF LUMINESCENCE AND FLUORESCENCE IN MICROBIOLOGICAL STUDIES. 18 July 63, 30p. 35 refs. JPRS: 20228.
Order from OTS $1.00 63-31319

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1962, v. 33, no. 3, p. 9-14, 18-27.

DESCRIPTORS: *Antibodies, *Fluorescence, *Luminescence, Microorganisms, Diagnosis, *Vibrio, Diseases, *Salmonella, *Typhoid, Blood, *Anthrax, Adsorption, Analysis.

Contents:
The possibility of using specific fluorescent antibodies for the rapid detection of cholera vibrio in water, by E. V. Chibrikova and others
The possibility of detecting typhoid-paratyphoid bacteria in the blood by using luminescent sera, by L. V. Mirolyubova
Obtaining of specific anthrax fluorescent serum, by V. A. Blagoveshchenskii and others
Problems of serum adsorption for luminescence analysis, by N. A. Kuz'min.

USE OF LUMINESCENSE IN MICROBIOLOGICAL TESTS. 18 July 63, 12p. 5 refs. JPRS: 20237.
Order from OTS $0.50 63-31323

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1961, v. 32, no. 11, p. 26-29, 52-56.

DESCRIPTORS: *Luminescence, *Fluorescence, Gamma rays, *Clostridium tetani, *Vaccines, Molecular spectroscopy, Bacteria, Tests.

Contents:
Experiment in the application of fluorescent sera to practical work, by M. E. Lipkin and others
Characteristics of gamma-ray irradiated tetanus toxiod preparations according to the data of molecular spectral analysis and luminescent analysis, by V. M. Vadimov and I. M. Goncharenko.

Carlson, Sven.
INFLUENCE OF LOW ALTERNATING CURRENTS ON BIOSYNTHESIS OF GLUCONIC ACID BY ASPERGILLUS NIGER IN SUBMERSE CULTURE (Die Einfluss von Niederen Wechselströmen auf die Biosynthese der Gluconsäure durch Aspergillus Niger in Submerser Kultur). [1962] 12p. (tables omitted).
Order from SLA $1.60 63-10506

Trans. of Arch[iv] f[ür] Mikrobiologie (Germany) 1960, v. 37, p. 7-17.

DESCRIPTORS: *Aternating currents, *Biosynthesis, *Glycolic acids, *Phycomycetes, Culture media, Molds (Organisms), Bioelectronics, Biophysics.

Under the influence of weak alternating currents, biosynthetic formation of gluconic acid by Aspergillus niger in submerse and aerated cultures showed augmented gluconic acid output. The acceleration of biosynthesis in the first few hours was very great, about 100 to 200 percent over untreated control at optimum amperages. Thenceforward, fermentation rate decreased because of augmented acid output. When AC frequency was changed from 50 to 30, 50,000 and 100,000 cps, fermentation was likewise accelerated, so that electrolytic manifestations did not account for the phenomenon. Electrically treated cultures transferred to new medium did not retain their enhanced enzyme activity. Under AC stimulation, gluconic acid formation was also encouraged at lower pH values. (Author)

Cherchenko, I. I.
FLUORESCENT ANTIBODIES IN MICROBIOLOGY (SURVEY). 14 June 63, 17p. 108 refs. JPRS: 19693.
Order from OTS $0.50 63-31044

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1963, no. 2, p. 93-101.

DESCRIPTORS: *Antigens and antibodies, *Fluorescence, Etiology, Microorganisms, Diagnosis, Pathology.

Heimburger, N. and Schwick, G.
FIBRIN AGAR ELECTROPHORESIS. PT. 2. STUDIES ON MECHANISM OF ACTION OF STREPTOKINASE (Die Fibrinagar-Elektrophorese, 2 Mitt.). [1962] 11p. (figs. omitted) 15 refs
Order from SLA $1.60 63-10505

Trans. of Thromb[osis et] Diath[esis] Haem[orrhagica] (West Germany) 1962, v. 7, no. 5/6, p. 444-456.

DESCRIPTORS: *Fibrin, *Electrophoresis, *Phosphorus transferases, Culture media, Fibrinogen, *Streptococcus, Enzymes.

Maiboroda, G. M. and Dashkevich, I. O.
PURIFICATION OF ANTIMICROBIAL FLUORESCENT ANTIBODIES USING ANIONITE AV-17. Rept. I on Purification of Fluorescent Conjugates from free Fluorochrome Using Ion Exchange Resins. 15 July 63, 6p. 5 refs. JPRS: 20164.
Order from OTS $0.50 63-31279

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1963, no. 3, p. 55-58.

DESCRIPTORS: *Antigens and antibodies, *Ion exchange resins, *Fluorescence, *Microorganisms, Purification, Proteins, Dyes, Immune serums.

The possibility of simple, rapid, and effective purification from free fluorochrome of several fluorescent conjugates through use of the anionite AV-17 has been shown. When fluorescent conjugates are purified under the new method their serological activity and fluorescent properties are wholly preserved. (Author)

Melkumova, T. L.
INFLUENCE OF ANTIBIOTICS ON THE ACTIVITY AND VIRULENCE OF NODULE BACTERIA OF ALFALFA. [1963] [10]p. 7 refs. FASEB manuscript no. S 361-2.
Order from OTS or SLA $1.10 63-19363

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1962 [v. 27] no. 1, p. 117-121.

DESCRIPTORS: *Antibiotics, Adaptation (Physiology), Viability, *Bacteria, *Grasses, Streptomycins, Aureomycin.

Streptomycin in a concentration from 10 to 0.01 unit/ml has an inhibitory effect on the development of pure cultures of nodule bacteria. The addition of streptomycin in a concentration from 10 units to 0.0001 unit/ml to Kovrovtseva's medium inhibits the growth and development of alfalfa and the physiological activity and virulence of nodule bacteria. In a concentration of 0.0000001 unit/ml streptomycin stimulates the growth and development of nodule bacteria somewhat. The nodule bacteria of alfalfa are less sensitive to biomycin than to streptomycin. Their development as well as plant growth are inhibited by biomycin in concentrations of 10 units and 1 unit/ml. (Author)

Moshentseva, L. V. and Kondrat'eva, E. N.
CHLOROPHYLL PRODUCTION BY PURPLE AND GREEN BACTERIA IN PHOTOAUTOTROPIC AND PHOTOHETEROTROPIC DEVELOPMENT (Obrazovanie Khlorofillov Purpurnymi i Zelenymi Bakteriyami pri Fotoavtotrofnom i Fotogetorotrofnom Razvitii) tr. by M. Kassatkin. Sep 62, 13p. (foreign text included) 8 refs.
Order from OTS or SLA $1.60 UCRL Trans-870

Trans. of Mikrobiologiya (USSR) 1962, v. 31, no. 2, p. 199-202.

DESCRIPTORS: *Chlorophylls, *Bacteria, Production, *Light, Photosynthesis, *Growth, *Organic pigments, Cells (Biology), Organic acids.

The amount of chlorophyll in purple bacteria Rh. palustris and Chr. minutissimus and of bacterioviridin in green bacteria Chl. thiosulphatophilum and Chl. ethylicum varies in the course of growth. Maximum of these pigments in the cells is noted in the logarithmic phase of growth. In photoautotrophic development purple and green bacteria contain less chlorophills than when grown in media containing acetic, pyruvic, butyric, succinic acid or ethanol. In various species of purple bacteria (Rh. palustris and Chr. minutissimus) the content of bacteriochlorophills is similar media, except propionic acid medium Green Chl. thiosulphatophilum and Chl. ethylicum bacteria grown in a mineral medium likewise contain a similar amount of bacterioviridin. (Author)

Zinov'eva, I. S. and Shpagina, M. K.
THE USE OF LUMINESCENT SERUM FOR THE RAPID DIAGNOSIS OF DYSENTERY. 18 June 63, 5p. 16 refs. JPRS: 19720.
Order from OTS $0.50 63-31062

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1962, v. 33, no. 12, p. 112-114.

DESCRIPTORS: *Antigens and antibodies, *Fluorescence, Diagnosis, Bacteria, Salmonella, Etiology, *Gastrointestinal system, Diseases, Enterobacteriaceae.

There is a high degree of specificity in Flexner antidysentery serum used for diagnosis of dysentery. The luminescent-serological method not only made it possible to establish the etiology of dysentery cases very completely, but also to detect the presence of a dysentery agent in material under examination in as little as 2-3 hours. (Author)

Neurology and Psychiatry

Luriya, A. R.
HIGHER CORTICAL FUNCTIONS IN MAN: CONCLUSION AND TABLE OF CONTENTS: 2 July 63, 7p. JPRS: 19998.
Order from OTS $0.50 63-31188

Trans. of mono. Vysshie Korkovye Funktsii Cheloveka, Moscow, 1962, p. 395-397, 430-432.

DESCRIPTORS: *Cerebral cortex, Physiology, Man, Pathology, Neurology.

Mekler, L. B., Lapteva, N. N., and Lozovskii, D. V.
SECRETION OF TOXIC PROTEIN FROM THE BLOOD SERUM IN SCHIZOPHRENIA: PRELIMINARY COMM. (O Vydelenii Toksicheskogo Belka iz Syvorotki Krovi Bol'nykh Schizofreniei; Predvaritel'noe Soobshchenie) tr. by Wanda Feeley. Aug 60, 3p. PSC no. 58-1594.
Order from OTS or SLA $1.10 62-24326

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1958, v. 58 [no. 6] p. 703-704.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 60-16471 [1960] 2p.

DESCRIPTORS: *Serum proteins, Blood chemistry, Toxicity, *Psychoses, Inhibition.

Taraxein isolated from the blood serum of schizophrenics develops a pronounced inhibition of a motor activity in the mice. The preliminary data on the study for identification of the preparation indicate that taraxein is actually a protein.

BIOCHEMICAL CHANGES RESULTING FROM IRRADIATION, HIGH TEMPERATURE, BURNS, AND POLIOMYELITIS. 22 July 63, 29p. 34 refs. JPRS: 20298.
Order from OTS $1.00 63-31356

Trans. of Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) 1963, v. 7, no. 2, p. 9-14, 58-62, 68-71.

DESCRIPTORS: *Radiation effects, *Burns, High-temperature research, *Poliomyelitis, Immunology, Transplantation, Dogs, *Radiation injuries, Metabolism, Minerals, *Proteins, Tissues (Biology), Cardiovascular system, Permeability, Pressure, *Cholinesterase, Mice, Biochemistry.

Contents:
Some immunological data on the fate of bone marrow transplanted to dogs after whole-body irradiation, by I. L. Chertkov and others
Changes in mineral and protein metabolism in calcified tissues following thermal burns, by B. E. Movshev
The mechanism of changes in vascular-tissue permeability following the effect of high external temperature on the organism, by F. F. Sultanov
The change of heteroprotein specificity under the effect of temperature and pressure, by G. Ya. Rozenberg and others
The activity of cholinesterase of various protein tissues of mice during experimental poliomyelites, by L. V. Donskaya and R. A. Khaunina.

MEDICAL JOURNAL, 1962, VOL. 84, NO. 2. 1963, 56p. 132 refs. PL-480 HEW.
Order from OTS $0.50 62-11763/2

Trans. of Lijecnicki Vjesnik (Yugoslavia) 1962, v. 84, no. 2, p. 131-180.

DESCRIPTORS: *Medicine, *Pathology, *Arachnids, *Poisoning, *Bites and stings, Diagnosis, Blood serum, *Whooping cough, *Pancreas, *Necrosis, Diseases, *Wounds and injuries, Electric currents, *Smallpox.

Contents:
Latrodectism in Yugoslavia, by B. Vanovski
Some experiences in the serological diagnosis of whooping cough, by N. Kohler-Kubelka and B. Mravunac
The treatment of acute necrosis of the pancreas by an antiferment, by B. Milosevic
A clinical contribution to the knowledge of favism, by V. Vince-Ribaric
Electrical injuries, by T. Beritic and others
Favism in Yugoslavia, by T. Beritic
Emergency treatment of electrical current injuries, by A. Markicevic
Our attitude to the problem of smallpox, by V. Breitenfeld
Reflexions on smallpox outbreaks, by T. Beritic.

MEDICAL JOURNAL, 1962, VOL. 84, NO. 4. 1963, 49p. 98 refs. PL-480 HEW.
Order from OTS $0.50 62-11763/4

Trans. of Lijecnicki Vjesnik (Yugoslavia) 1962, v. 84, no. 4, p. 323-371.

DESCRIPTORS: *Medicine, *Pathology, *Surgery, *Respiratory system, *Salmonella, Diseases, Nitrogen compounds, *Furan derivatives, *Cancer, *Acoustic nerve, Symposia, Syncope.

Contents:
On the extensive use of tracheotomy in present-day clinical practice, by D. Riessner and N. Butigan
An epidemic of Salmonellosis java in a Zagreb hospital, by I. Vodopija and others
Laboratory study and principles of the clinical application of nitrofurantion, by Z. Zagar
A case of successfully operated acoustic neurinoma, by R. Sunaric
Syncope, by Z. Horvat
Clinico-pathological conferences
Syncopal episodes, by T. Beritic and Z. Asperger
The general practitioner in the world and in Yugoslavia, by Z. Jaksic and D. Stahuljak.

Alieva, V. I.
THE EFFECT OF EXPERIMENTAL GASTRITIS ON THE RATE OF ENTRY INTO THE LARGE BOWEL OF FOOD SUBJECTED TO VARIOUS TYPES OF MECHANICAL PROCESSING. [1962] [12]p. 3 refs. FASEB manuscript no. S 153-2.
Order from OTS or SLA $1.60 63-19002

Trans. of Voprosy Pitaniya (USSR) 1962, v. 21, no. 3, p. 66-71.

DESCRIPTORS: *Gastritis, Intestine, *Food, Processing, *Gastrointestinal system, Stomach, Physical properties, Physiology.

Two dogs were subjected to experimental gastritis by a mixture of a 0.5% solution of HCl with natural gastric juice. Instead of the usual mixed standard food ration, the rations were ground in a meat grinder or homogenized. The studies showed that the course of the excretion was not greatly different from that under physiological conditions. The linear velocity of food residues along the intestine increased in experimental gastritis. The volume of chyme collected from the same dog on [illegible] was extremely variable. A small portion of chyme was excreted during the first one or two hours after feeding, and the amount subsequently increased irregularly to a maximum and then began to diminish. The character of the changes in volume flow was the same in gastritis as in the normal, but the weight of the one-hour collections varied during the period of reduction. When unground food was given during gastritis the volume rate increased for both dogs, while when ground food was given the volume rate increased in only one dog. Throughout the experiment the linear and volume rates changed independently of each other. It was concluded that the linear velocity depends somewhat on the condition of the stomach. Recovery from gastritis appeared to proceed very slowly.

Baklanova, V. F. and Nikitina, N. N.
MULTIPLE MYELOMA IN A CHILD [1962] [5]p.
FASEB manuscript no. S 89-2.
Order from OTS or SLA $1.10 63-15986

Trans. of Vestnik Rentgenologii i Radiologii (USSR) 1962, v. 37, no. 1, p. 65-66.

DESCRIPTORS: *Cancer, *Bone, Pediatrics, *Children, Diagnosis, *Medical examination, Nephritis, X-rays, Skeleton.

A case history of a 7 year old girl who died of multiple myelomata is presented. The first signs of the disease appeared in the form of pyletis in 1958. On March 13,1959 she was hospitalized, where she was treated, on the basis of extensive laboratory test, and blood studies for glomerulonephritis. She injured her leg on March 29, 1959. An X-ray revealed multiple myeloma of the bones of knee. X-ray of other bones showed similar patholohy. She died on April 11, 1959. The author points out that it was only as a result of the X-rays taken after the knee injury that a correct diagnosis was made in this case.

Borroni, V.
GENERAL ANESTHESIA FOR CEREBRAL ANGIOGRAPHY (L'anestesia Generale per le Arteriografie Cerebrali). [1963] 19p.
Order from SLA $1.60 63-14770

Trans. of Minerva Anestesiologica (Italy) 1960, v. 26, p. 277-284.

DESCRIPTORS: *Anesthesia, *Angiography, *Brain, Drugs, Medical examination.

Bukharin, O. V.
THE EFFECT OF VITAMIN B_{12} ON PHAGOCYTOSIS. [1962] [13]p. 7 refs. FASEB manuscript no. S 223-2.
Order from OTS or SLA $1.60 63-19006

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1962 [v. 33] no. 2, p. 37-41.

DESCRIPTORS: *Vitamin B complex, *Phagocytosis, Reticuloendothelial system, *Dibasol, *Leukocytes, Eosinophils, Immunity.

The influence of vitamin B_{12} on the phagocytic activity of leukocytes was studied; and the actions of dibasol and vitamin B_{12} on phagocytosis were compared. Injections of vitamin B_{12} helped to increase the phagocytic activity of the leukocytes in rabbits. After the control group was given a physiological solution, the experimental and control animals were immunized with a vaccine containing typhoid, paratyphoid B, and dysentery antigens. Investigation showed that the phagocytic index had risen in all animals; however, the index in the experimental animals was higher than that in the control animals. A month after immunization, the mean phagocytic index was 1.9 for the control animals and 2.1 for the experimental animals. The mean opsonic index was 1.35 in the controls, but 1.6 in the experimental animals; therefore vitamin B_{12} raised the opsonizing capacity of serum in rabbits. Vitamin B_{12} also brought the phagocytic reaction to completion. Experiments on white mice demonstrated that phagocytosis was most pronounced when dibasol and vitamin B_{12} were used together but that vitamin B_{12} alone was somewhat more effective than dibasol alone. The administration of vitamin B_{12} affords increased protection to the organism receiving the vitamin.

Cappelano, Renato.
THE INCIDENCE OF SYPHILIS, ALCOHOLISM AND TABAGISM IN PATIENTS WHO ARE CARRIERS OF CANCER OF THE UPPER AERO-DIGESTIVE PASSAGES. [1963] 10p. 21 refs.
Order from SLA $1.10 63-16575

Trans. of Revista Brasilera de Cirurgia, 1960, v. 39, no. 6, p. 518-522.

DESCRIPTORS: *Venereal disease, *Addiction, *Cigarettes, Smokes, *Cancer, Respiratory system, Etiology, Gastrointestinal system.

Chistova, Z. Ya.
CULTURE OF THE VIRUS OF INFECTIOUS POULTRY LARYNGOTRACHEITIS. [1962] [12]p.
FASEB manuscript no. S 256-2.
Order from OTS or SLA $1.60 63-19016

Trans. of Veterinariya (USSR) 1962 [v. 39] no. 4, p. 87-91.

DESCRIPTORS: Culture media, *Viruses, *Larynx, *Respiratory system, Chickens, Embryos, *Communicable diseases, Tissues (Biology), Cells (Biology).

The virus of infectious poultry laryngotracheitis (IPL) was cultured on chick embryos and in a fibroblast tissue culture. The virus was isolated and used to infect 12-day-old chick embryo chorioallantoes. A skin-muscle tissue culture of the chick embryo fibroblasts was prepared. The cytopathogenic action of the virus was manifested 4 to 5 days after infection of the tissue culture cells. Strain P caused numerous small nodules and sometimes large focal lesions on the chorioallantois of the infected embryos. The pathological material caused a zone of edema and infections at the sites of application. Seven passages of the virus were made on tissue cultures of the embryo fibroblasts. Beginning with the first passage, the virus on the fourth to fifth day after infection caused cell damage with more pronounced vacuolization than in the controls. The fibroblasts were converted into very fine long cells with enlarged spaces between them. By the seventh to eighth day, the tissue was separated from the glass, while the control had a smooth single layer. With each additional passage, the cytopathogenic effect became more pronounced and constant. When the IPL virus was mixed with normal rabbit serum, cytopathogenic effects occurred in 50% of the cultures, but with hyperimmune serum no effects occurred.

Conti, A. and Negro, G.
CONSIDERATIONS ON THE RELATIONSHIP BETWEEN CIGARETTE SMOKE AND LUNG CANCER. [1963] 14p. 29 refs.
Order from SLA $1.60 63-16585

Trans. of Minerva Medica (Italy) 1961, v. 52, p. 631-634.
Another trans. is available from K-H $17.50 as K-H-11095-c [1962] 14p.

DESCRIPTORS: *Cigarettes, *Smokes, *Lungs, *Cancer, Etiology, Cancer research.

Danilin, V. T.
THE PATHOLOGICAL ANATOMY OF LEPTOSPIROSIS IN DOGS. [1962] [13]p. 25 refs. FASEB manuscript no. S 140-2.
Order from OTS or SLA $1.60 63-15997

Trans. of Arkhiv Patologii (USSR) 1962, v. 24, no. 3, p. 39-44.

DESCRIPTORS: Anatomy, *Spirochetosis, *Dogs, Pathology, Liver, Intestine, Spleen, Lymphatic system.

Two forms of leptospirosis were detected: the anicteric (uremic) form caused by Leptospira canicola and the icteric form, which sometimes proves fatal. Serious pathological effects resulted in dogs afflicted with leptospirosis icterohaemorrhagica. Anatomical investigations revealed jaundice and multiple hemorrhages, acute venous stasis and edema of the liver and lungs, invagination of the intestine, and hyperplasia of the lymph glands and spleen. The most characteristic histological changes were nephroso-nephritis and disturbance of the trabecular structure of the liver, and inflammation of the kidneys. A disturbance of the calcium metabolism resulted in calcium deposits in the kidneys, heart muscle, and stomach. The presence of metastatic calcification in the icteric form indicated that the pathogenesis of the two forms of leptospirosis is similar.

Demidova, N. V.
ELECTROPHORETIC INVESTIGATION OF SERUM LIPOPROTEINS IN CORONARY INSUFFICIENCY. [1963] [17]p. 21 refs. FASEB manuscript no. S 300-2.
Order from OTS or SLA $1.60 63-23017

Trans. of Terapevticheskii Arkhiv (USSR) 1962, v. 34, no. 8, p. 46-52.

DESCRIPTORS: *Electrophoresis, Blood proteins, *Lipoproteins, Diseases, *Heat, *Blood circulation, Atherosclerosis.

A fall in the blood α-lipoprotein and a rise in the β-lipoprotein level were observed in conditions of coronary insufficiency. These variations are connected mainly with atherosclerotic coronary cardiosclerosis in the patients. In myocardial infarction patients, the most pronounced fall in the α-lipoprotein level and the most pronounced rise in the β-lipoprotein level were observed during the second week of illness. When anticoagulants were administered, a less pronounced and later (from the 4th week) tendency for the α-lipoprotein level to fall and the β-lipoprotein level to rise was observed. The administration of heparin does not cause monotypical variations in the lipoprotein fraction ratio. In stenocardia patients, almost the same initial values for the plasma lipoproteins were obtained as in myocardial infarction, but no pronounced dynamic fluctuations of the lipoproteinogram were observed. The degree of fluctuations of the lipoproteinogram in the coronary insufficiency patients showed some correspondence with the fluctuations of the proteinogram and the severity of the disease. (Author)

Ganelina, I. E., Komarova, I. N. and Kraevskii, Ya. M.
THE THYROID FUNCTION IN RELATION TO THE STATE OF LIPID METABOLISM IN PATIENTS WITH DIENCEPHALIC SYNDROME. [1963] [21]p. 24 refs. FASEB manuscript no. S 297-2.
Order from OTS or SLA $2.60 63-23015

Trans. of Klinicheskaya Meditsina (USSR) 1962, v. 40, no. 9, p. 129-135.

DESCRIPTORS: *Thyroid gland, Diseases, Brain, Thalamus, *Lipids, *Metabolism, *Convulsive disorders, Epilepsy, Biochemistry

The functional state of the thyroid gland, as determined from basal metabolism, I^{131} absorption, and protein-bound iodine, was found to be changed in one or the other direction in the majority of patients with diencephalic syndrome. There was no correlation between the clinical manifestation of the disease and the functional state of the thyroid gland, as well as between individual indices determining this state. The nature of the disorder in lipid metabolism during diencephalic syndromes differs with clinical symptoms associated with the predominant lesion of one or the other section of the hypothalamus. Lipid metabolism disturbances in patients with diencephalic syndrome are not directly associated with the change in the functional state of the thyroid gland. The change in lipid metabolism and in the thyroid function of these patients depends on the disorder of central regulating mechanisms. (Author)

Gel'shtein, V. I.
THE SIMPLIFICATION OF THE ANTIGENIC STRUCTURE OF THE LIVER PROTEINS OF MICE IN THE PROCESS OF EXPERIMENTAL CARCINOGENESIS 1 Oct 62, 5p. 14 refs. NIH no. 10-2-62.
Order from OTS or SLA $1.10 63-13015

Trans. of #Byulleten' Eksperimental'noi Biologii i Meditsiny (USSR) 1958, v. 46, no. 9, p. 96-100.

DESCRIPTORS: *Antigens and antibodies, *Liver, Proteins, *Cancer, Adaptation (Physiology), *Carcinogenic agents, Toluidines, Azo compounds, Mice, Anaphylactic shock.

"The simplification of the antigenic structure has been revealed during the experimental carcinogenesis in mouse liver at the precarcinogenic stage, induced with orthoaminoazotoluene in transplanted and induced hepatoma. These experiments were performed with the aid of the anaphylactic reaction following desensitization." (Author)

Gorshunova, L. P.
ROLE OF THE LYMPH NODES IN THE MECHANISM OF NATURAL RESISTANCE TO RABIES. [1962] [9]p. 6 refs. FASEB manuscript no. S 228-2.
Order from OTS or SLA $1.10 63-19009

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1962 [v. 33] no. 2, p. 45-48.

DESCRIPTORS: *Lymphatic system, Tissues (Biology), Resistance, *Immunology, *Rabies, Excision, *Antibodies.

Experiments were performed on 50 white rats weighing 120 to 140g. Twenty-five rats with excised inguinal lymph nodes and 25 control animals were inoculated in the femoral muscle with street rabies virus. On the 11th, 12th, and 42nd day after inoculation, blood from both groups was analyzed for its content of virus-neutralizing antibodies. Antibodies were found in the blood of the control animals on the 11th day and the number increased in all the rats examined on the 22nd day, whereas in some animals with excised nodes no antibodies were found until the 22nd day and in others not until the 42nd day. Fourteen of the rats with excised nodes and 13 of the control rats became sick and died, most of them between the 10th and 12th days after inoculation. In all the experimental and control rats rabies was manifested by paralysis in the extremities. Thus, there was no difference in the development of the infectious process in both groups. No significant differences were found between the antibody content of the blood of the clinically healthy animals and that of the sick animals. These data indicate that natural resistance to street rabies virus is not related to the presence or absence of virus-neutralizing antibodies in the blood.

Karpyuk, S. A. and Germanyuk, Ya. L.
TRANSAMINASE ACTIVITY AND CONTENT OF SERUM PROTEIN FRACTIONS IN CERTAIN DISEASES OF THE ABDOMINAL ORGANS. [1963] [12]p. (15 refs. omitted) 11 refs. FASEB manuscript no. S 96-2.
Order from OTS or SLA $1.60 63-19368

Trans. of Voprosy Meditsinskoi Khimii (USSR) 1962, v. 8, no. 3, p. 270-274.

DESCRIPTORS: *Transaminases, Blood proteins, *Diseases, *Abdomen, Pancreas, Liver function tests, Gall bladder.

The activity of α-ketoglutarate-alanine transaminase of the blood serum increases in a number of acute diseases of the organs of the abdominal cavity; its highest activity is noted in acute cholecystitis and pancreatitis. The activity of α-ketoglutarate-aspartate transaminase increases only in pancreatitis and in phlegmonous and destructive cholecystitis. A correlation between the increase in α-ketoglutarate-alanine transaminase and the severity of the case was noted only in cholecystitis, but not in other diseases. (Author)

Kho, I-khion, Yan, Ueikon', and Mao, Shou-bei.
HISTOPATHOLOGICAL INVESTIGATIONS OF LIVER IN EXPERIMENTAL SCHISTOSOMIASIS DUE TO SCHISTOSOMA JAPONICA (Gistopatologicheskie Issledovaniya Pecheni pri Eksperimental'nom Yaponskom Shistozomatoze). 7 Mar 62 [9]p. 4 refs. NIH no. 3-9-62.
Order from OTS or SLA $1.10 62-23688

Trans. of Meditsinskaya Parazitologiya i Parazitarnye Bolezni (USSR) 1960, v. 29, no. 2, p. 179-183.

DESCRIPTORS: Histology, Pathology, *Liver, *Biliary system, *Schistosomiasis, Parasitic infections, Embryos, Cells (Biology), Laboratory animals.

This is a study of the histological pathology in the liver of mice, rabbits and guinea pigs 5 to 133 days after inoculation with Schistosma japonica. The infections were induced by subcutaneous injections of mice with 40 cercaria and of rabbits with 200 cercaria. The livers of the guinea pigs were inoculated with saline extract of the parasite culture or live Schistosoma ova. Round cell infillration of the liver was observed one week after inoculation of the mice. These infiltrated areas developed into focal or coagulation necrosis. Pathological changes in the liver cells included nuclear vacualization, mitosis and cellular fatty degeneration. Phlebitis and thrombosis of the portal vein was usually present. The changes in the biliary system were hypertrophy of the epithelial layers, with eosinophilic granules in the lumen. Abscesses formed at the sites of the egg deposits. These developed into fibrous tubercles. The intensity of these lesions was in direct proportion to the number of eggs in the inoculation. There were 2 distinct types of fibers or radiating rays in these abscesses. One type was composed of eosinophilic rays surrounding ova containing the embryo. The other type was found of round cells adjacent to the eosinophilic rays. These changes usually took place in mice about 79 days after infestation.

Kucherenko, A. E.
HEMODYNAMIC SHIFTS AND ELECTROCARDIOGRAPHIC CHANGES IN ACUTE PANCREATITIS. [1963] [16]p. 25 refs. FASEB manuscript no. S 290-2.
Order from OTS or SLA $1.60 63-23009

Trans. of Klinicheskaya Meditsina (USSR) 1962, v. 40, no. 8, p. 123-127.

DESCRIPTORS: *Hematology, *Electrocardiography, Diseases, *Pancreas.

Deterioration of the functional capacity of the cardiovascular system is of reflex origin in acute pancreatitis, as shown by a drop in arterial and venous pressures, slowing of the rate of blood flow, and the appearance of pathological shifts in the EKG. These changes, functional in nature, are indicative of decreased vascular tone and lowered myocardial function. The therapeutic measures should include drugs that stimulate vascular tone and the myocardium. Normalization of the EKG is aided by a paraneural novocain block, which apparently relieves the overstimulated state of the nervous system and receptors in the focus of the disease. Dynamic EKG investigations are helpful in making an early differential diagnosis between myocardial infarct and acute pancreatitis. When the hemodynamic indices and EKG shifts are abnormal, the patient should be kept in the hospital even when the clinical symptoms of acute pancreatitis have disappeared. (Author)

Kurashov, S. V., Gold'fail, L. G., and Pospelova, G. N.
HEALTH RESORTS OF THE USSR. PT. 2 HEALTH RESORTS, SANATORIA AND REST HOMES. 12 July 63, 1051p. JPRS: 20154.
Order from OTS $14.00 63-31274

Trans. of mono. Kurorti SSSR, Moscow, 1962, p. 87-737.

DESCRIPTORS: *Health resorts, Hospitals, Medicine, Directories, *Public health.

Lagrange, E.
LETHAL AUTOSTERILIZATION OF EGYPTIAL FOWL PLAGUE IS AN EPIDEMIC PHENOMENON (L'Autosterilisation Mortelle de la Peste Aviaire d'Egypt est un Phenome ne Epidemique). [1963] 5p. 5 refs.
Order from SLA $1.10 63-14850

Trans. of Soc[iété] de Biol[ogie et de ses Filiales]. Compt[es] Rend[us des Séances] (France) 1931, v. 106, no. 1, p. 1081-1084.

DESCRIPTORS: *Plague, *Birds, Egypt, *Epidemiology, Virus diseases, Immunity, *Antigen-antibody reactions.

Lagrange, E.
ON LETHAL AUTOSTERILISATION OF CHICKEN VACCINATED AGAINST THE EGYPTIAN FOWL PLAGUE (Sur L'Autosterilisation Mortelle des Poules Vaccinees Contre la Peste Aviaire d'egypte). [1963] 2p. 3 refs.
Order from SLA $1.10 63-14851

Trans. of Soc[iété] de Biol[ogie et de ses Filiales]. Comp[tes] Rend[us des Séances] (France) [1931] v. 106, no. 1, p. 1080-1081.

DESCRIPTORS: *Plague, *Birds, Egypt, Virus diseases, Vaccines, *Antigen-antibody reactions, *Epidemiology.

Lagrange, E.
STUDIES ON THE AVIAN PLAGUE OF EGYPT (Études sur la Peste Aviaire d'Egypte). [1963] [50]p. 34 refs.
Order from SLA $4.60 63-14800

Trans. of Inst[itut] Pasteur [Paris]. Annales (France) 1932, v. 48, no. 2, p. 208-267.

DESCRIPTORS: *Plague, *Birds, Egypt, *Virus diseases, Immunity, *Antigen-antibody reactions, Epidemiology.

Lazarev, N. I.
THEORETICAL ASPECTS OF HORMONAL PROPHYLAXIS OF HORMONALLY INDUCED TUMORS. [1962] [24]p. 16 refs. FASEB manuscript no. S 357-2.
Order from OTS or SLA $2.60 63-19026
Figs. available on loan from OTS

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1962, v. 17, no. 6, p. 23-35.

DESCRIPTORS: *Hormones, *Tumors, Etiology, Drugs, Endocrine glands, Inhibition.

This is a general outline of the basic principles governing the relationship between the functions of the endocrine glands and how these relationships may be a factor in preventing dyshorminal tumors.

Lobko, A. F.
KARYOMETRIC INVESTIGATIONS OF LIVER TAP MATTER IN DISEASES OF THE DIGESTIVE TRACT. [1963] [17]p. 8 refs. FASEB manuscript no. S 381-2.
Order from OTS or SLA $1.60 63-23029

Trans. of Arkhiv Patologii (USSR) 1962, v. 24, no. 9, p. 33-39.

DESCRIPTORS: *Mitosis, *Cells (Biology), *Liver, Diagnosis, Diseases, Gastrointestinal system, *Histological techniques.

Karyometry together with morphological, laboratory, and general clinical investigation of liver tap matter may facilitate the differential diagnostics of a number of diseases of the organs of the abdominal cavity. The karyometric curve in cancer of the stomach and of the pancreas without metastases to the liver is commonly high-peaked and has a tendency to shift to the right. Primary localization of the cancer in the liver and the appearance of metastases in it alter the nature of the karyogram: the high-peak disappears and the curve becomes longer on the right side of the karyogram. In patients with ulcer of the stomach and duodenum and those with inflammatory processes in the gall bladder the karyogram is situated in the left portion and has a single high peak. Added complications (hemorrhage or a suppurative process in the gall bladder) are characterized by disappearance of the high-peak, distinct enlargement of the nuclei, and a shift of the curve to the right. (Author)

Magrassi, F., Leonardi, G., and Scanu, A.
OBSERVATIONS ON A VIRAL ENCEPHALOPATHY OF THE CAT (Osservazioni su un'Encefalopatia Virale del Gatto). [1963] 3p.
Order from SLA $1.10 63-16428

Trans. of Soc[ietà] Ital[iana di] Biol[ogia] Sper[imentale]. Boll[ettino] 1951, v. 27, p. 1233. Another trans. is available from SLA as 58-557.

DESCRIPTORS: *Encephalitis, Encephalitis viruses, *Cats, Zoonoses.

Mansurov, Kh. Kh.
AN ANALYSIS OF 625 CASES OF NEEDLE LIVER BIOPSY. [1962] [11]p. 8 refs. FASEB manuscript no. S 88-2.
Order from OTS or SLA $1.60 63-15987

Trans. of Terapevticheskii Arkhiv (USSR) 1962, v. 34, no. 7, p. 72-78.

DESCRIPTORS: Liver, Diagnosis, Diseases, Medical examination, *Histological techniques, *Liver function tests, Tissues (Biology), *Hepatitis (Nonviral).

The indications, contraindications, possible complication, and the diagnostic value of liver biopsies taken by means of an aspirating needle are evaluated. The accuracy of this procedure in differential diagnosis of liver pathology in 625 cases was analyzed. The contraindication for this procedure are listed under 10 categories. The author concludes that if done correctly in cases without contraindications needle liver biopsy should be a valuable diagnostic tool in clinics and large hospitals.

Myasishchev, V. N., Gol'din, L. S., and others.
ELECTRON MICROSCOPY OF THE CEREBRAL CORTEX IN ALBINO RATS SUBJECTED TO A NUMBER OF PATHOLOGICAL CONDITIONS. [1963] [15]p. 15 refs. FASEB manuscript no. S 329-2.
Order from OTS or SLA $1.60 63-23027

Trans. of Arkhiv Patologii (USSR) 1962, v. 24, no. 1, p. 70-78.

DESCRIPTORS: *Electron microscopy, *Cerebral cortex, Rats, Pathology, Cells (Biology), Anesthesia, Toxicity, Alcohols.

In white rats which have been under anesthesia there is an increase in the degree of dispersion of the nuclear and cytoplasmic contents of many of the cells in the cerebral cortex. Under conditions of excitation, the opposite picture is observed: the nuclear contents are aggregated into larger clumps; the membrane nucleoproteins are increased and often appear in the form of large granules situated along the nuclear membrane, either on its interior or exterior surface. The ctyoplasm of the drainage glia contains large numbers of inclusions. Chronic alcoholic intoxication is associated with the following changes in many of the neurons of the cerebral cortex: dilatation of the canaliculi and vesicles of the endoplasmic reticulum; increase in Palade granules; with deposition of these granules on the walls of the canaliculi and vesicles of the endoplasmic reticulum and in the spaces between. These changes correspond to the condition which has been described in the literature under the name of cloudy swelling. Along with these cells, there are also many neurons which have progressed to the stage of complete sclerosis, accompanied by disintegration of the nucleus and dilatation or destruction of the synaptic structures and conducting systems. These changes point to the presence of local edema. (Author)

Nieschulz, O. and Bos, A.
FURTHER INVESTIGATIONS ON THE INFECTION OF MICE WITH THE FOWL PLAGUE VIRUS (Weitere Untersuchungen über die Infektion von Mäusen mit Hühnerpestvirus). [1963] 7p. 5 refs.
Order from SLA $1.10 63-14832

Trans. of Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten. [Abt. 1. Originale] (Germany) 1934, v. 131, p. 1-6.

DESCRIPTORS: *Mice, Communicable diseases, *Plague, *Birds, Brain, Blood, Virus diseases, Immunity.

Nieschulz, O., Bos, A., and Tarip.
EXPERIMENTS ON TRANSMISSION OF FOWL PLAGUE AND EGYPTIAN PLAGUE (Übertragungsversuche mit Geflügelpest und Stegomiya Ägypti). [1963] 10p. 4 refs.
Order from SLA $1.10 63-14852

Trans. of Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten. [Abt. 1. Originale] (Germany) 1931, v. 121, p. 413-420.

DESCRIPTORS: *Epidemiology, *Plague, *Birds, Egypt, *Virus diseases.

Podlevskii, A. F.
PHAGOCYTOSIS IN TYPHOID PATIENTS. [1962] [16]p. 10 refs. FASEB manuscript no. S 221-2.
Order from OTS or SLA $1.60 63-19005

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1962 [v. 33] no. 1, p. 57-62.

DESCRIPTORS: *Phagocytosis, *Typhoid, Leukocytes, Corticosteroids, Antibiotics.

Sixty-eight typhoid patients were treated to determine the effectiveness of various treatments on phagocytosis. In most patients, a favorable course of convalescence progressed. Phagocytosis of the typhoid bacilli was found to be about twice as intense as that of the Shigella sonnei. A second examination showed a decrease in phagocytosis of Sonne's bacilli to normal levels and a marked increase regarding typhoid microbes in patients whose convalescence was favorable. The highest indices and most rapid increase were noted in cases of moderate severity, the lowest in severe cases, thus testifying to the varying ability of the body to mobilize its defensive forces. The increase in phagocytic activity in patients with recurrences, complications, or prolonged subfebrile conditions was wavelike: prior to a complication the index tended to decrease; afterwards it increased slowly but steadily. Therefore, a decrease in intensity at the height of the disease can be regarded as an unfavorable sign. The highest indices during the disease and convalescence were noted in patients treated symptomatically. The indices were lower with antibiotics and lowest when antibiotics together with prednisone were given. These results indicate that antibiotics inhibit phogocytosis when used alone and to a greater extent when combined with prednisone. The author concludes that comprehensive therapy is the most effective treatment of typhoid fever patients.

Rockl, H. and Thies, W.
FOCAL, CHRONIC RECURRENT CONDITIONS OF FATTY TISSUE: THE HISTOPATHOGENESIS OF LIPOGRANULOMATOSIS. [1963] 12p. (figs. omitted).
Order from SLA $1.60 63-14885

Trans. of Hautarzt (West Germany) 1957, v. 8, p. 58-65.

DESCRIPTORS: Pathology, *Neoplasms, Lipids, Tissues (Biology).

Three patients in whom a symmetrically located, chronically recurring, spontaneously appearing disease of small foci in the subcutaneous fatty tissue of the lower extremities, without fever of impairment of general health is described, are classified as cases of Lipogranulomatosis subcutanea Rothmann-Makai on grounds which are clinical, histopathologic and histopathogenetic. (Author)

Roslavleva, N. G.
COMPARATIVE DATA OF ELECTROENCEPHALOGRAPHY IN CHILDREN OPERATED FOR CONGENITAL HEART DISEASE. [1963] [7]p. 3 refs. FASEB manuscript no. S 292-2.
Order from OTS or SLA $1.10 63-23665

Trans. of Klinicheskaya Meditsina (USSR) 1962, v. 40, no. 9, p. 67-71.

DESCRIPTORS: *Electroencephalography, Children, *Anomalies, *Heart, *Surgery.

In children with cyanotic heart disease preoperative electroencephalogram (E.E.G.) shows low voltage slow potentials indicating chronic cerebral hypoxia. No prominent changes can be demonstrated in children with non cyanotic heart disease particularly in younger age groups (3-5 years). In adolescents with complicated noncyanotic heart disease, the preoperative bioelectrical activity of the cortex is reduced. Postoperative E.E.G. shows increased amplitude of the waves, better organization of the rhythms and in a number of cases increased frequency. These data are indicative of the efficacy of surgical intervention. The improvement of hemodynamics is reflected in the functional state of the cortex. Uncomplicated operations carried out with the help of an artificial circulation machine or of hypothermia were not associated with any noticeable voltage reduction or deceleration of the cortical rhythms. (Author)

Rossa, F. Buonomo la.
TOBACCO AND CANCER OF THE LUNG. [1963] 7p.
Order from SLA $1.10 63-16586

Trans. of Rassegna Internazionale di Clinica e Terapia (Italy) 1950, v. 30, 30 Nov, p. 641-643.

DESCRIPTORS: *Tobacco, *Cigarettes, Smokes, *Cancer, Lungs.

Shakhnazarov, G. M.
THE EFFECT OF IMPROVED NUTRITION IN THE STIMULATION OF THE DEVELOPMENT PROCESS IN EARLY RABBIT EMBRYOS. [1962] [32]p. 22 refs. FASEB manuscript no. S 161-2.
Order from OTS or SLA $3.60 63-19003

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1962 [v. 27] no. 2, p. 260-270.

DESCRIPTORS: *Nutrition, *Rabbits, *Embryos, Stimulation, Growth, Morphology.

Female rabbits were fed diets high in protein and vitamins to stimulate their metabolic processes in order to alter early embryonic development. The developmental level of individual embryos was evaluated numerically. The more differentiated portions (anterior and middle) of the experimental group were longer than those of the control group, while the less differentiated portion (posterior) was longer in the control group. The length of the first 2 portions is directly related while that of the last portion is indirectly related to the developmental stage. A definite change occurred in the relationships of the parts of 9-day embryos with the experimental diet. The process of segmentation proceeded faster than growth or elongation. Improved nutrition accelerates embryonic development and also increases the degree of variability. The ineffectiveness of nutrition in some rabbits was attributed to heredity. There is no direct relationship between growth and differentiation; the cellular material is a factor in this process. Most of the large embryos were relatively narrow, and the small ones were relatively broad.

Sorokina, L. S.
CONGENITAL DIAPHRAGMATIC HERNIA IN THE NEWBORN. [1962] [6]p. 4 refs. FASEB manuscript no. S 92-2.
Order from OTS or SLA $1.10 63-15985
Figs. available on loan from OTS

Trans. of Akusherstvo i Ginekologiya (USSR) 1962 [v. 38] no. 1, p. 101-102.

DESCRIPTORS: *Hernia, *Diaphragm, *Infants, Gynecology, Anoxia, Growth, Anomalies.

The clinical signs of congenital diaphragmatic hernia are asphyxia, a muddy blue color of the skin, absence of crying in the presence of breathing and good cardiac activity, and marked deterioration of the child's general condition after artificial respiration. Postmortem examinations were made of two infants who had signs of diaphragmatic hernia. The pathological diagnosis of one infant was asphyxia resulting from a congenital developmental defect of the internal organs; congenital right diaphragmatic hernia, displacement of the small intestine and the accessory lobe of the liver through an opening in the right cupola of the diaphragm into the right pleural cavity; and maldevelopment of the right eyeball. Examination of the other infant revealed asphyxia, developmental defects of the internal organs; congenital left diaphragmatic hernia; displacement of the small intestine and spleen through the opening in the left cupola of the diaphragm into the left pleural cavity; and malposition of the heart, liver, stomach and cecum. The treatment of diaphragmatic hernia is operative, but surgical treatment is impossible for aplasia. These operations are not done on the newborn because with large defects the infants soon die, and with small defects they may survive without operation.

Ulovich, A. I.
INCREASED SENSITIVITY AND LOWERED RESISTANCE TO NARCOTICS, SEDATIVES AND ANALGESICS IN ANOXIA. [1962] [19]p. 64 refs. FASEB manuscript no. S 143-2.
Order from OTS or SLA $1.60 63-15999

Trans. of Arkhiv Patologii (USSR) 1962, v. 24, no. 3, p. 60-68.

DESCRIPTORS: *Anoxia, *Analgesics and antipyretics, *Narcotics, *Hypnotics and sedatives, Resistance, *Sensitivity, Toxicity.

Anoxia was induced using a mixture of nitrogen and oxygen; sodium amytal, urethane, and chloralose were injected intraperitioneally. The excitability of the pain reflex was recorded. The unanesthetized rabbits survived respiration of a gas mixture containing 13.4% oxygen; the anesthetized animals, as a rule, died after exposure to anoxia for periods ranging from 25 minutes to 4.5 hours. The injection of sodium amytal into rabbits in anoxia caused a fall in blood pressure and vascular tone, and respiratory arrest. Urethane and chloralose caused a rise in blood pressure and increased respiration. During anoxia the excitability of the animals increased: the threshold of excitation of the pain reflex lowered and a violent reaction to threshold stimulation developed. A paradoxical response to stimulation was characteristic of the flexor and vasomotor components of the pain reaction. These facts

about the pain reflex show the development of a marked inhibition during prolonged anoxia. Anoxia and narcotics act as synergists on the body, causing general depression.

Vasil'ev, Yu. M. and Gel'shtein, V. I.
THE RELATIONSHIP BETWEEN PRECANCEROUS CHANGES AND REACTIVE PROLIFERATION. [1962] [22]p. FASEB manuscript no. S 356-2.
Order from OTS or SLA $2.60 63-19024

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1962, v. 17, no. 6, p. 7-16.

DESCRIPTORS: *Neoplasms, *Cancer, Etiology, *Carcinogenitic agents, *Cells (Biology), Adaptation (Physiology), Growth, *Tissues (Biology).

By utilization of established data concerning the selection of modified cell variants, the author attempts to analyze the various stages of carcinogenesis and the nature of the precancerous processes. His own and other research findings were used to formulate a working hypothesis for further research. These are: (1) Tissue during carcinogenesis constitute a distinctive pathological process, differing from ordinary reactive physiological proliferation. (2) The characteristic biological feature of cell populations exposed to carcinogenic substances in the early stages is decreased reaction to stimuli inducing proliferation. (3) This suppression of reparative proliferation may lead to selection and the accumulation of cells with modified reactivity in the tissue, thereby forming a precancerous focus. (4) The reactivity of precancerous foci in relation to proliferative stimuli is most commonly increased. (5) The cells of precancerous foci are not identical with truly malignant cells. (6) The appearance of precancerous foci is only the first step in the progressive changes in reactivity of cell populations, leading ultimately to the appearance of autonomously proliferating cell populations, an autonomous malignant tumor.

Volchkov, B. P.
EXCRETION OF 17-KETOSTEROIDS IN URINE AS A BASIS FOR FUNCTIONAL ASSESSMENT OF THE ADRENAL CORTEX IN HYPERTENSIVE VASCULAR DISEASE. [1962] [25]p. 21 refs. FASEB manuscript no. S 253-2.
Order from OTS or SLA $2.60 63-19015

Trans. of Klinicheskaya Meditsina (USSR) 1962, v. 40, no. 5, p. 77-85.

DESCRIPTORS: Excretion, *Steroids, *Urine, Physiology, *Adrenal cortex, *Hypertension, Cardiovascular system, Ketones.

This is an attempt to elucidate the role of the adrenal cortex in the genesis of hypertension. Tabulations to ascertain relationships between excretion of the 17-ketosteroids in the urine and (1) age of patient, (2) sex (3) stage of the disease, (4) duration of disease, and (5) arterial pressures of patients were made on 100 hypertensive patients. Analysis of the condition of patients showing the largest deviations from the average 17-ketosteroid excretion gave no indication of any factors on which the level of excretion might depend. The excretion of the 17-ketosteroids was not decreased in patients with various liver diseases. No relationship was noted between the 17-ketosteroid level and the erythrocyte sedimentation rate, the blood prothrombin level, hematuria and protienuria. These tabulations showed that the function of the adrenal cortex is weakened in hypertensive vascular disease. The author, therefore, concludes that it cannot be a factor in genesis of this disease. He suggests that the morphological and functional changes found in the adrenal cortex of hypertensive patients are not the cause of the hypertension but a consequence of it.

Zhmeido, A. T., Grafskaya, Z. S., and Chernikova, N. V.
THE PRODUCTION OF A PURE AVITAMINOSIS-D IN RATS. [1962] [7]p. 2 refs. FASEB manuscript no. S 106-2.
Order from OTS or SLA $1.10 63-15989

Trans. of Voprosy Pitaniya (USSR) 1962, v. 21, no. 4, p. 71-74.

DESCRIPTORS: *Deficiency diseases, *Vitamin D, *Diet, Phosphatases.

Avitaminosis-D was developed in rats in about one month on a balanced diet lacking only in vitamin D. This deficiency caused growth to be retarded or to cease. Ration Ia consisted of 20g casein heated for 15 to 16 hours at 100°, 60g corn starch, 10g brewers' yeast, 4g Osborne-Mendel salt mixture (+$CuSO_4$), 1g NaCl, and 5g lard. Rations Ib and Ic consisted of 15g casein, 73g corn starch, 8g dried brewers' yeast, and 4g Osborne-Mendel salt mixture (+$CuSO_4$). The casein in Ib was heated and that in Ic was extracted twice with alcohol for 12 hours. Ration 2 consisted of 90g wheat (72% extraction) flour, 5g dried brewers' yeast, 4g Osborne-Mendel salt mixture (+$CuSO_4$), and 1g NaCl. All the rats received carotene. Some rats in each experiment received vitamin D_2. With ration Ia no difference was observed between the rats receiving and not receiving vitamin D. With ration Ib, in the rats given vitamin D the ash content of the bones was slightly higher but the gain in weight was smaller. With ration Ic the gain in weight was slightly higher, but there was no increase in ash content or decrease in the phosphatase. A balanced diet with normal salt content and casein as the source of protein did not produce obvious signs of vitamin D deficiency. With ration 2 the rats given vitamin D had a slightly higher ash content of the bones, a lower phosphatase level in the blood, and a more marked increase in weight. Ration 2, which was deprived of its rachitogenic properties, made the signs of "pure" avitaminosis-D more noticeable

Zil'ber, L. A. and Bayadakova, Z. K.
IMMUNIZATION AGAINST CANCER OF THE MAMMARY GLAND IN MICE. 21 Feb 62 [11]p. 7 refs. NIH no. 2-45-62.
Order from OTS or SLA $1.60 62-23490

Trans. of Voprosy Onkologii (USSR) 1955, v. 1, no. 5, p. 14-20.

DESCRIPTORS: *Cancer, Mice, *Mammary glands, *Immunity, Nucleoproteins, Methanols, Antigens.

Mice were immunized at the age of 5 to 7 weeks with preparations obtained from both primary and metastasized tumors in the mammary glands of line A mice. The following preparations were used: (1) a formalinized nucleoproteid fraction obtained from tumorous tissue by alkaline extraction, (2) a formalinized methanol precipitate from tumorous tissue, and (3) formalinized 10% suspension of the tumor. A total of 2561 mice were used. A nucleoproteid fraction and suspension from normal organs from black mice which did not contain cancer virus of the mammary gland were used as the control antigen. Cancerogenesis was not influenced by immunization of line A mice with antigens void of the virus or with tissue containing the non-concentrated virus. When mice were immunized with a nucleoproteid fraction from the tumors of mammary glands which contained cancer virus in a high concentration, the appearance of tumors in the 6th month was noted in 3% of the mice, both in the experimental and control groups. In the 7th month, the frequency of appearance of tumors in the experimental groups was lower than that in the control group by 11%. By the 8th and 9th months, the difference was 22%, after which the difference decreased. Immunization with methanol precipitate retarded tumor appearance. Immunization with non-formalinized methanol precipitate increased the frequency of tumor appearance.

Pharmacology and Toxicology

NEW TASKS IN DEVELOPMENT OF BIOCHEMICAL PRODUCTIONS. 5 July 63, 6p. JPRS: 20041.
Order from OTS $0.50 63-31215

Trans. of Meditsinskaya Promyshlennost' (USSR) 1963 [v. 17] no. 4, p. 3-6.

DESCRIPTORS: *Drugs, Medicine, *Hormones, *Steroids, *Alkaloids, *Vitamins, *Antibiotics, Industrial production, Microorganisms, Biochemistry.

PHARMACOLOGY AND TOXICOLOGY, 1963, VOL. 26, NO. 2: [SELECTED] TRANSLATIONS. 10 July 63, 42p. 60 refs. JPRS: 20109.
Order from OTS $1.25 63-31250

Trans. of #Farmakologiya i Toksikologiya (USSR) 1963, v. 26, no. 2, p. 131-138, 157-163, 172-179, 184-188.

DESCRIPTORS: *Pharmacology, *Toxicity, *Serotonin, Bioelectronics, Organic compounds, *Phosphorylases, Esters, Drugs, *Autonomic agents, *Cholinesterase inhibitors, Phosphoric compounds (Organic).

Contents:
Some serotonin antagonists, by V. V. Zakusov
Quantitative study of the penetration of a positively charged organic phosphorus anticholinesterase compound from the blood into different parts of the cat brain, by E. V. Zeimal'
Ganglioblocking agents in a series of bis-quaternary salts of dialkyl-amino-alkyl esters of n-methyl- α-pyrrolidine carboxylic acid, by D. A. Kharkevich
The mechanism governing the action of armin and nibuphin, by L. S. Afonskaya and others.

PROCESS FOR PREPARATION OF C. C. -DIALKYL-BARBITURIC ACIDS. [9 Feb 53] 2p.
Order from OTS or SLA $1.10 63-16306

Trans. of Austrian patent 34, 243, suppl. to 27, 417.

DESCRIPTORS: *Pyrimidines, *Barbiturates, Synthesis (Chemistry), Condensation reactions, Alkyl radicals, Ethyl radicals, Urea derivatives, Malonic esters, Halides, Cyano radicals, Acetates, Nitriles.

Albahari, C., Renault, J. and others.
DESFERRIOXAMINE B THERAPY OF SIDEROSES. COMPARISON WITH THE ACTION OF TWO OTHER CHELATING AGENTS (Le Traitement des Sidéroses par la Desferrioxamine B. Comparison Aves l'Action de Deux Autres Chélateurs). Apr 63, 18p. 18 refs.
Order from SLA $1.60 63-16345

Trans. of la Presse Méd[icale] (France) 1962, v. 70, 29 Dec, p. 2833-2826.

DESCRIPTORS: *Iron compounds, Anemias, *Hemochromatosis, Antibiotics, *Oximes, *Complex compounds, *Chelate compounds, Drugs, Chemotherapeutic agents.

Arnold, O. H.
α-METHLDOPA, EFFECTS AND SIDE-EFFECTS IN THE TREATMENT OF ARTERIAL HYPERTENSION (α-Methyldopa, Wirkungen und Nebenwirkungen bei der Therapie des Arteriellen Hochdrucks). [1963] 6p. 9 refs.
Order from SLA $1.10 63-10924

Trans. of D[eutsche] Med[izinische] W[ochenschrift] (West Germany) 1962, v. 87, 9 Nov, p. 2288-2290.

DESCRIPTORS: *Vasoactive agents, Therapy, Drugs *Hypertension, *Toxicity, Methyl radical, Blood pressure.

The actions and side effects of α-methyldopa were observed in 75 patients with hypertension in long-term studies. Sixty-two patients were observed longer than 1 month, and up to 15 months, altogether 388 months, 6 of them longer than 12 months and 22 longer than 9 months. In combination with thiazides, the effect on high blood pressure is definitely more potent than that of reserpine + thiazide, but somewhat weaker than that of guanethidine + thiazide. As to side-effects, aside from a sedation, usually temporary, 2 instances of febrile reactions without other evidence of disease and three times transient psychotic reactions were observed.

Blanpin, O. and Quevauviller, A.
ON THE HORMONAL EFFECT OF SOME STEROID ALKALOIDS OF FUNTUMIA AND HOLARRHENA, PLANTS OF THE APOCYNACEAE FAMILY (Effets Hormonaux de Quelques Alcaloides Stéroides). [1962] 11p. 9 refs.
Order from SLA $1.60 63-10491

Trans. of Sem[aine des Hopitaux] Thérap[eutique] (France) 1960, v. 36, no. 10, p. 909-912.

DESCRIPTORS: *Hormones, *Steroids, Alkaloids, *Corticosteroid agent, Drugs, Pharmacology, *Sex glands, Plants (Botany).

Funtumine, funtumidine, holamine, holaphyllin and holaphyllamine exhibit a structural relationship to progesterone and cortisone which justifies the search for some hormonal activity. A study was made of the effect of these alkaloids and of the semi-synthetic steroid, glucofuntumidine, on the gonads and adrenal glands. A cortisone-like effect and certain metabolic changes were also investigated. (Author)

Bremer, Friedrich Wilhelm and Felix, Wolfgang.
ON THE EFFECTS OF NICOTINE ON THE CIRCULATION. I. LOCAL EFFECTS ON THE VESSELS OF THE SKIN AND THE SKELETAL MUSCLE OF THE CAT. [1963] 19p. 39 refs.
Order from SLA $1.60 63-16590

Trans. of Zeitschrift für Biologie (West Germany) 1960, v. 111, no. 5, p. 379-392.
Another trans. is available from K-H $23.75 as K-H-10402-b, Nov 60, 19p.

DESCRIPTORS: *Nicotine, *Blood circulation, *Skin, *Muscles, Cats, Pharmacology, Toxicity.

It is shown that nicotine influences circulation indirectly by the stimulation of nerve structures. Probably this involves post-ganglionic sympathetic nerve fibers, adrenergic ones with a constrictive effect as well as cholinergic ones with a dilating effect. The threshold dose which just produces the local vessel reactions is higher than that which already produces changes in the blood pressure and heart frequency with an intravenous infusion. Local vascular effects of nicotine in the skin and skeletal muscle therefore probably play only a slight role in circulatory changes in the case of low intravenous doses of nicotine or in the case of the inhalation of cigarette smoke. (Author)

Chabbert, Y. A.
RECENT ANTIBIOTIC DRUGS (Antibiotiques Recents). [1963] 4p.
Order from SLA $1.10 63-16510

Excerpt trans. of la Presse Méd[icale] (France) 1961, v. 69 [no. 24] p. 1079-1081.

DESCRIPTORS: *Antibiotic, Drugs, *Colimycin.

Fedorov, N. A.
DISTRIBUTION OF AMINAZINE LABELED WITH RADIO SULFUR IN SEGMENTS OF THE CENTRAL NERVOUS SYSTEM AND OTHER ORGANS IN DOGS AND RABBITS (Raspredelenie S^{35} -Aminazina v Otdelakh Tsentral'noi Nervnoi Sistemy i Organakh Sobak i Krolikov) tr. by Wanda M. Feeley. Aug 60, 8p. PSC no. 57-1588.
Order from OTS or SLA $1.10 62-24332

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1957, v. 57 [no. 6] p. 761-767.
An abstract trans. is available from LC or SLA mi$1.80, ph$1.80 as 60-18565 [1960] 1p.

DESCRIPTORS: *Chlorpromazine, Drugs, *Absorption (Physiology), *Tracer studies, Radioactive isotopes, Sulfur, Central nervous system, Laboratory animals, *CNS depressants.
The characteristics of the distribution of aminazine in segments of the central nervous system of different laboratory animals were studied and compared with the distribution found in rats in prior research. (Primenenie Radioaklivnyjkh Isotopov . Klinicheskikh i Eksperimental'nykh Issledovaniyakh, Moscow, 1958; available in translation from OTS as 60-51178). Rabbits, mice and dogs were injected with aminazine labeled with radioactive sulfur (S^{35}). The animals were killed at varying intervals following the injections. The radioactivity of fresh tissues of all the organs and segments of the central nervous system was determined. The distribution of aminazine in dogs and rabbits was similiar to that found in rats. Generally the distribution of aminazine was found to be similiar in dogs, rabbits, and white mice. In dogs, the accumulation in the cerebral cortex is greater than in other sections of the brain and spinal cord. In rabbits and rats, there was no difference in the absorption of the drug by the cerebral cortex and other parts of the central nervous system. The tests on dogs, rabbits, and rats indicate that aminazine is distributed with unusual selectivity in the organs of these animals.

Glussman, I., Rossi, R., and Ton, A.
VALUE OF PYRIBENZAMINE IN PROPHYLAXIS OF ALLERGIC COMPLICATIONS DURING ANGIOGRAPHY (Valor de la Piribenzamina en la Profilaxis de Accidentes Alergicos en el Curso de la Angiografia). [Feb 63] 3p. 7 refs.
Order from SLA $1.10 63-10919

Trans. of [el] Dia Med[ico] (Argentina) 1962 [v. 34] 18 June, p. 1046.

DESCRIPTORS: *Pyribenzamines, Inhibition, Drugs, *Allergy, Antigen-antibody reactions, *Angiography, Antihistaminics.

Gorbadei, N. K.
FUNCTIONAL STATE OF THE LIVER AND NERVOUS SYSTEM AFTER CHRONIC EXPOSURE TO CARBON DISULFIDE. [1963] [15]p. 14 refs. FASEB manuscript no. S 313-2.
Order from OTS or SLA $1.60 63-23024

Trans. of Terapevticheskii Arkhiv (USSR) 1962, v. 34, no. 9, p. 95-99.

DESCRIPTORS: Physiology, *Liver, *Nervous system, *Poisoning, *Carbon compounds, *Sulfides, Toxicity, Industrial medicine.

Workers exposed to carbon disulfide frequently experience disorders of the gastrointestinal tract as well as changes in the nervous system. Functional changes in the liver (distinct lowering of the antitoxic, carbohydrate, and protein functions) usually appear early in the development of chronic carbon disulfide poisoning. The patients examined were found to have low arterial pressure, a decrease in the erythrocyte count, a reduction in hemoglobin concentration, an increase in the eosinophil count, and a slowing of the erythrocyte sedimentation rate. Besides various technical and hygienic measures designed to achieve better working

conditions, it is essential to improve the quality of the preliminary and periodic medical examinations, taking into account functional impairment of the liver and several other changes noted in the clinical examinations. Those responsible for organizing the feeding of workers in synthetic fiber factories should be aware of the possibility of gastrointestinal disorders and functional impairment of the liver arising in persons exposed to carbon disulfide. (Author)

Harkany, I.
EXPERIMENTAL AND CLINICAL INVESTIGATIONS OF RELAXIL-G. [1962] [20]p. FASEB manuscript no. S. 117-2.
Order from OTS or SLA $1.60 63-15993

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1962, v. 17, no. 8, p. 44-50.

DESCRIPTORS: Drugs, Angiography, *Glycerol ethers, *Anesthetics, *Hypnotics and sedatives, *Muscle relaxants, Toxicity, Barbiturates.

The data presented relate to a curare-like substance known as Mi-301, Reorganin, or Relaxil CT which is a glyceryl-guiacol ether. The drug was given to both animal and human subjects. The human subjects studied consisted of 46 healthy subjects and patients aged 14 to 65 years. They were given 1 to 8g of drug intravenously, and observed from 30 minutes to 5 hour. Paralysis of voluntary movements began 4 to 6 minutes after the injection and continued for 20 to 30 minutes. The respiration and autonomic nervous system remained unaffected during the curare-like effect. Secretions in the tracheobronchial system was not increased. The blood pressure dropped 10-15 mm Hg and the pulse was accelerated. Electrocardiographs were unchanged. Doeses of 4 to 5g produced a rather marked relaxation of the abdominal musculature. In human subjects who had been given doses of 1 to 13g, the blood cholinesterase was unchanged an hour after administration. The drug was used on 115 surgical patients as an anesthetic in conjunction with several different narcotics and anesthetics, including barbituates and intratracheal anesthesia. Relaxil G when given intravenously was found to be a moderately effective narcotic and analgesic which intensifies the action of other narcotics. It acts on the central neurons of the midbrain, bulbospinal system. It is recommended for general anesthesia and as a supplement to local anesthesia, particularly for patients in poor condition.

Jaky, M. and Koranyi, A.
THE EFFECT OF α-TOCOPHEROL ON THE ACTIVITY OF SOME NATURAL FAT MIXTURES IN DECREASING SERUM LIPIDS IN CASES OF ARTERIOSCLEROSIS. [1963] 7p. 3 refs.
Order from SLA $1.10 63-14395

Trans. of Fette Seifen Anstrichmittel (West Germany) 1963, v. 65, p. 11-13.

DESCRIPTORS: *Vitamin E, Drugs, Blood serum, Lipids, *Atherosclerosis, Therapy.

The authors reported on their recent experimental results on atherosclerotic patients fed a fat diet. They used diets producing a serum lipid-decreasing effect containing a mixture of lard and sunflower or safflower oils and ascertained that the essential fatty acids exerted an optimal effect when the ratio of essential fatty acids to tocopherol (in g./mg.) had a value of approximately 2.2. This content can be reached if one adds to lard 25% of natural sunflower oil, whereas in the case of safflower oil tocopherol must be added. In the 5 experimental groups described, the fat mixture containing 13 g. essential linoleic acid and 5.75 mg. α-tocopherol gave the greatest effect. (Author)

Kalamkaryan, A. A.
BULLOUS AMINAZINE DERMATITIDES (Bulleznye Aminazinovye Dermatity) tr. by W. M. Feeley. Jan 61, 3p. (refs. omitted). PSC no. 60-1116.
Order from OTS or SLA $1.10 62-24315

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1960, v. 60 [no. 5] p. 593-594.

DESCRIPTORS: Drugs, *Chlorpromazine, *Skin, Toxicity, Antigen-antibody reactions, Allergy.

Korganova, A. N.
AMINAZINE THERAPY OF ADOLESCENTS IN A PSYCHIATRIC CLINIC (PRELIMINARY COMMUNICATION) (Lechenie Aminazinom Podrostkov v Psikhiatricheskoi Klinike (Predvaritel'noe Soobshchenie)) tr. by W. M. Feeley. Feb 61, 7p. PSC no. 56-700.
Order from OTS or SLA $1.10 62-24334

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1956, v. 56, no. 7, p. 567-570.

DESCRIPTORS: *Chlorpromazine, Therapy, *Psychoses, Drugs, *Psychotropic agents, Psychiatry.

The results of treatment of 14 adolescents suffering from schizophrenia are discussed. Detailed case histories of 3 of these cases are given. The author states that the data obtained from these cases confirms the therapeutic efficacy of aminazine (chlorpromazine) in adolescent schizophrenics. Excitation is eliminated and the patients come out of severe psycotic states rapidly.

Kuroyanagi, Shigeru; Miyajima, Sekiji and others.
EFFECT OF CARZINOPHILIN ON MALIGNANT TUMORS. [1963] 4p.
Order from SLA $1.10 63-16527

Trans. of Gann (Japan) 1956, v. 47, no. 3/4, p. 359-360.
Another trans. is available from SLA as 58-629.

DESCRIPTORS: Drugs, Antibiotics, Therapy, *Cancer, *Streptomycins, Chemotherapeutic agents.

Moeschlin, S., Bickel, H. and others.
EXPERIENCES WITH DESFERRIOXAMINE IN PATHOLOGICAL IRON DEPOSITS: ROUND TABLE DISCUSSION (Erfahrungen mit Desferrioxamin bei Pathologischen Eisenablagerungen: Gespräch am Runden Tisch). Feb 63, 29p.
Order from SLA $2.60 63-14721

Trans. of Schweiz[erische] Med[izinische] W[ochenschrift] 1962, v. 92, 20 Oct, p. 1295-1306.

DESCRIPTORS: Drugs, Chemotherapeutic agents, *Iron compounds, *Oximes, *Hemochromatosis, *Chelate compounds, *Complex compounds.

Oifa, A. I.
PATHOLOGICAL AND ANATOMICAL CHANGES IN RATS AFTER ADMINISTRATION OF INCREASING DOSES OF AMINAZINE (Patologoanatomicheskie Izmeneniya u Krys pri Vvedenii Narastayushchikh Doz Aminazina) tr. by Wanda M. Feeley. Feb 61, 8p. (refs. omitted). PSC no. 57-1616.
Order from OTS or SLA $1.10 62-24330

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1957, v. 57, no. 2, p. 214-219.

DESCRIPTORS: Pathology, Anatomy, Rats, *Chlorpromazine, Dosage, *Tolerances (Physiology), Drugs, Cerebral cortex, Liver, *CNS depressants.

The morphological changes of the internal organs and brain of white rats following administration of increasing doses of aminazine were studied. The mininum dose of the drug which produced adynamia in rats was considered to be the minimum therapeutic dose. Animals of approximately the same age and weight were selected for the study. The drug was administered in 24 rats which were divided into groups according to the amount of drug administered. Six rats were used as controls. The amount of drug given these groups ranged from a therapeutic dose to a dose 22.2 times the therapeutic dose. The animals that did not die of aminazine poisoning were killed by severing their heads with scissors. Prolonged administration of therapeutic and double therapeutic doses of aminazine did not cause any changes in the internal organs and brains of rats. Fatty degeneration of the liver was present 20 to 30 days after 3 and 4 fold therapeutic doses. These doses produced no changes in the brain. Degenerative changes in the brain tissue were not found until the dosage equalled 5 1/2 times the therapeutic dose. The cells of the cerebral cortex of the animals that were killed possessed the staining characteristics indicative of cerebral hypoxia. As there was no hypoxia found in the animals who died of aminazine poisoning, the author concluded that aminazine does not cause any hypoxial changes in the cerebral cortex.

Polezhaev, E. F.
THE EFFECT OF SMALL DOSES OF AMINAZINE AND ADRENALIN ON THE FORMATION OF CORTICAL COORDINATION (Vliyanie Aminazina i Adrenalina v Malykh Dozakh na Formirovanie Korkovoi Koordinatsii) tr. by Wanda M. Feeley. Jan 61, 12p. (refs. omitted). PSC-60-1112.
Order from OTS or SLA $1.60 62-24318

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1960, v. 60, no. 5, p. 568-576.

DESCRIPTORS: *Chlorpromazine, Dosage, Drugs. Psychotropic agents, Autonomic agents, *Epinephrine, *Cerebral cortex, *Conditioned reflex.

This article is the analysis of the correlation of excitability of competing reflexes under conditions of administration of small doses of aminazine and adrenalin. The effect of these drugs on the formation of cortical coordination during elaboration of different conditioned reflexes is presented. (Author)

Rachiba, G. I.
INFLUENCE OF ATROPINE ON THE ELECTROCARDIOGRAM. [1963] [17]p. 14 refs. FASEB manuscript no. S 293-2.
Order from OTS or SLA $1.60 63-23012

Trans. of Klinicheskaya Meditsina (USSR) 1962, v. 40, no. 9, p. 75-81.

DESCRIPTORS: Drugs, *Atropine, *Electrocardiography, Diagnosis.

The phase of short-term increase in vagus nerve tone preceding the negative vagotropic effect of atropine on the heart can be manifested on electrocardiograms by such complex disturbances as atrioventricular rhythm, dissociation by interference, and wandering pacemaker, as well as by deceleration of sinus rhythm and lengthening of atrioventricular conductivity. The above disturbances of rhythm are frequently observed after administration of atropine to young people with functional disturbances of the nervous system and increased vagus nerve tone, without symptoms of organic cardiac pathology. The frequent appearance under the influence of atropine of dissociation by interference and atrioventricular rhythm in non-rheumatic diseases and sometimes in healthy individuals lowers the diagnostic value of these cardiac reactions to the given alkaloid during the active phase of rheumatic disease. (Author)

Ramseier, H. R.
ACTION OF NISIN ON CLOSTRIDIUM BUTYRICUM PRAZM. [1963] [49]p. 124 refs.
Order from SLA $4.60 63-10947

Trans. of Archiv für Mikro[biologie (Germany 1960, v. 37, p. 57-94].

DESCRIPTORS: Antibiotics, Drugs, *Peptides, *Clostridium, *Germicides, Streptococcus.

Rathke, F. W.
DIANABOLIC SUBSTANCES IN SCHEUERMANN'S DISEASE (INQUIRY DR. R. IN ST.) (Dianabole Wirkstoffe bei Scheuermann'scher Erkrankung (Anfrage Dr. R. in St.)). [1963] 2p.
Order from SLA $1.10 63-10932

Trans. of [die] Med[izinische] Welt (West Germany) 1962, no. 33, p. 1714.

DESCRIPTORS: *Dianabol, Bones, *Spinal column, *Androgens, *Estrogens, Growth, Growth substances, Diseases, Hormones, Drugs.

Schlaak, W.
VITAMIN E IN THREATENED ABORTION IN CATTLE. [1963] [7]p. 11 refs.
Order from SLA $1.10 63-14409

Trans. of Tierärztliche Umschau (West Germany) 1961, v. 16 [no. 2] p. 46-48.

DESCRIPTORS: *Vitamin E, Inhibition, Therapy, Drugs, *Pregnancy, *Cattle.

Semenovich, N. I., Kaigorodova, G. E., and Nozdryukhina, L. R.
USE OF ISMELIN IN VARIOUS FORMS OF HYPERTENSION. [1963] 13p. 6 refs. FASEB manuscript no. S 304-2.
Order from OTS or SLA $1.60 63-23021

Trans. of Terapevticheskii Arkhiv (USSR) 1962, v. 34, no. 8, p. 109-113.

DESCRIPTORS: *Guanethidine, *Hypertension, Drugs, Vasoactive agents.

Ismelin guanethidine is a highly effective hypotensive agent, producing a good therapeutic effect in essential and renal hypertension. An improvement sets in even in cases where other agents have proved ineffective. Treatment should be started with small doses (10-20 mg per day), and in the absence of positive results the dose can be gradually increased to 50-75 mg after 3-4 days. In cases of stable high arterial pressure, a prolonged course of ismelin treatment is indicated. Ismelin can be used for treatment under both hospital and polyclinic conditions. (Author)

Solano Aguilar, Elfren.
SYPHILITIC LESIONS CURED WITH DEMETHYLCHLORTETRACYCLINE (Lesiones Sifiliticas Curadas con Demetilclortetraciclina). Paper presented at the Central American Congress of Medicine (no. 9) San Jose, Nov 61 and the Central American Congress of Dermatology (no. 3) Tegucigalpa, Dec 61. [1962] 7p. 17 figs. omitted)
Order from SLA $1.10 63-10518

Trans. of Revista Medica de Costa Rica, 1962, v. 19, no. 334, p. 101-108.

DESCRIPTORS: *Venereal diseases, *Treponema pallidum, *Declomycin, Antibiotics, Drugs, Therapy, *Spirochaeta.

Twenty-four patients exhibiting syphilitic lesions were treated with demethylchlortetracycline. The photosensitization of the latter was investigated. The excellence of this substance against Treponema Sp was determined and it is suggested that it be used in experiments on other spirochetoses. Its excellence was verified clinically and in the laboratory. It is believed to be a substance which does not cause signs of photosensitization. (Author)

Stroikova, K. V.
LOCALIZATION OF THE SITE OF ACTION OF AMINAZINE IN SCHIZOPHRENICS (O Lokalizatsii Deistiva Aminazina u Bol'nykh Schizofreniei) tr. by Wanda M. Feeley. Aug 60, 13p. PSC no. 59-1104.
Order from OTS or SLA $1.60 62-24321

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1959, v. 59, p. 402-409.

DESCRIPTORS: *Chlorpromazine, *Psychoses, Cerebral cortex, Central nervous system, Inhibition, Conditioned reflex, Plethysmography, Reaction (Psychology).

The manifestation of the depressing effect of aminazine on the central nervous system depends on the functional state of the cortex and subcortex. In some schizophrenics with depressive symptoms aminazine produces inhibition of conditioned reflex activity, which occurs more rapidly and is more pronounced than the depression of the unconditioned reflexes. This makes one think about the initial effect of aminazine on cortical cells. The dynamics of depth of a blocking effect of aminazine developed by the plethysmographic method can be used for determining the characteristics of the functional state of more important sections of the central nervous system of a patient. These data can be used as the basis for individualization of the neuroplegic therapy and use of additional therapeutic methods The experimental data indicating a disturbance in respiration with a considerable depression of the action of aminazine on the subcortex, which is already inhibited pathologically, require caution in the selection of its doses and even its usage in these instances. (Author)

Tripod, J. and Keberle, H.
PHARMACODYNAMIC ASPECTS OF IRON MOBILIZATION IN THE ORGANISM (Aspects Pharmacodynamiques de la Mobilisation du fer dans l'Organisme) 19 Oct 62, 8p. 12 refs.
Order from SLA $1.10 63-16346

Trans. of Helvet[ica] Med[ica] Acta (Switzerland) 1962, v. 29, no. 5/6, p. 674-679.

DESCRIPTORS: Pharmacology, Drugs, Antibiotics, Chemotherapuetic agents, Iron, Metabolism, *Chelate compounds, Biochemistry, *Complex compounds, *Iron compounds, *Oximes, *Hemochromatosis.

Tara, S.
CARBON BLACK. [1963] 23p.
Order from SLA $2.60 63-14387

Trans. of Revue de Pathologie Générale et de Physiologie Clinique (France) 1960, v. 60, p. 643-680.

DESCRIPTORS: *Carcinogenic agents, *Benzopyrenes, *Carbon black, *Tar, Toxicity, *Industrial medicine, Cancer, Etiology

Traeger, J., Pellet, M., and Tellier, H. le.
TREATMENT OF URINARY INFECTIONS WITH COLISTIN (Traitement des Infections Urinaires par la Colistine). [1963] 16p. 21 refs.
Order from SLA $1.60 63-16542

Trans. of [la] Rev[ue] Lyon[naise] de Méd[ecine] (France) 1961, v. 10, Nov, p. 1085-1093.

DESCRIPTORS: *Urinary system, *Infections, Drugs, *Antibiotics, Therapy, *Colimycin.

Vogt, U.
TRIAL OF LONG-TERM TREATMENT OF MULTIPLE SCLEROSIS WITH TOLBUTAMIDE. 15 Jan 63, 3p.
Order from SLA $1.10 63-10905

Trans. of Medizinische Klinik (West Germany) 1962, v. 57, p. 1016-1017.

DESCRIPTORS: Therapy, *Multiple sclerosis, *Orinase, Hypoglycemia, Drugs.

Nineteen patients with multiple sclerosis were treated up to 10 months with tolbutamide, first as bed patients and then ambulatory. During this long-term treatment relapses were observed in four patients, after an initial improvement in neurological symptomatology. In none of the other cases could a change in the course of the disease be demonstrated. A relationship between a disturbance in carbohydrate metabolism, the course of the disease, and the use of tolbutamide was not observed.

Zaslavskaya, R. M.
CHANGES IN THE HEMODYNAMICS OF PATIENTS WITH CHRONIC NONSPECIFIC LUNG DISEASES CAUSED BY CERTAIN PHARMACOLOGIC AGENTS. [1963] [28]p. 29 refs. FASEB manuscript no. S 312-2.
Order from OTS or SLA $2.60 63-23023

Trans. of Terapevticheskii Arkhiv (USSR) 1962, v. 34, no. 9, p. 45-53.

DESCRIPTORS: *Hematology, Diseases, *Lungs, *Drugs, Toxicity, *Vasoactive agents, Blood circulation, Toxins and antitoxins.

Patients with chronic nonspecific lung diseases suffer impairment of myocardial contractility in the early stages of the diseases. Such impairment becomes particularly pronounced when it is associated with cardiopulmonary failure. Bacillus Calmette-Guérin (BCG) reactions provide indirect evidence of developing hypertension of the lesser circulation. Many drugs act on the smooth musculature of the bronchi and pressure in the pulmonary artery in scissors-like fashion. Some of them with broncholytic activity (epinephrine, atropine, ephedrine) also elevate pressure in the pulmonary artery at the same time. Other (acetylcholine) provoke a bronchial spasm and indirectly lower pressure in the pulmonary artery. Euphylline alone produces both a broncholytic and a vasodilating effect on the lesser circulation vessels. Chlorazicin should be included with the drugs that safely lower pressure in the pulmonary artery. Morphine and hexonium lower only elevated pressure but raise normal or low pressure. Patients with chronic nonspecific lung diseases have noticeably low venous tone. The administration of atropine, ephedrine, or euphylline does not affect venous tone. (Author)

Zavala Saenz, A., Jonquieres, E. D. L. and others
TOLERANCE TESTS ON DIPHENYLTHIOUREA IN PATIENTS WITH LEPROSY (Ensayo de la Tolerabilidad de la Difeniltiourea en Enfermos de Lepra). [Jan 63 [8]p. 15 refs.
Order from SLA $1.10 63-10920

Trans. of Semana Médica (Argentina) 1962, v. 120, no. 20, p. 734-737.

DESCRIPTORS: *Tolerances (Physiology), Drugs, *Thiourea derivatives, Diphenyl, *Leprosy, Toxicity.

Fifteen patients with lepromatous leprosy, 4 with the dimorphous form and 2 with the tuberculoid form were treated with diphenylthiourea with doses ranging between 1.5 and 3 gm. daily for periods of 2 to 16 months. The therapeutic action, although slow, proved to be comparable to that of the sulfones. The clinical improvement was considerable in 17 cases, 4 remained stationary and 1 became worse. Only 2 became negative bacteriologically. Tolerance was excellent. (Author)

Zolotnitskii, R. I.
TEMPERATURE REACTION IN AMINAZINE THERAPY OF SCHIZOPHRENICS AND PATIENTS WITH OTHER PSYCHIC DISORDERS (Temperaturnaya pri Lechenii Aminazinom Bol'nykh Shizofreniev i Nekotorymi Drugimi Psykhicheskimi Zabolevaniyami) tr. by Wanda M. Feeley. Mar 61, 4p. PSC no. 60-1453.
Order from OTS or SLA $1.10 62-24313

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1960, v. 60, p. 234-237.

DESCRIPTORS: *Body temperature, *Chlorpromazine, Therapy, *Psychoses, Drugs, CNS depressants, Leukocytes, Erythrocytes, Injection (Medicine), Tranquillizing agents.

The temperature reactions of 200 psychotic patients receiving aminazine therapy were observed and tabulated. The drug was given orally twice a day to 30 patients, intramuscularly twice a day to 90 patients. One intramuscular injection and one oral administration were given to 80 patients. Body temperatures were recorded 2 to 6 times a day. A stable elevation of temperature coincided with the intramuscular injections of 300 mg or more of the drug, accompanied by morbid infiltrations at the injection site. All of the 170 patients receiving aminazine intramuscularly had an elevation of temperature following the injections. In the 30 patients who received the drug orally temperature elevation occurred only 1 to 3 times in 5 patients. Eight patients were transferred from intramuscular to intravenous injections. Their temperatures dropped from 38 or more to normal in 2 or 3 days. When these patients were returned to intramuscular injections, their temperatures become elevated. A tabulation showing the relationship of temperature reactions and changes in the psychic state of 116 schizophrenics indicated that the therapeutic effect of aminazine therapy was greatest with high diurnal temperature elevation. The increased temperature was considered to be caused by tissue reactions at the site of the injections, and not a reaction to the drug.

Zolotnitskii, R. I., Bleikher, V. M. and others.
DYNAMICS OF BLOOD INDICES IN AMINAZINE THERAPY OF CHRONIC SCHIZOPHRENICS (Dinamika Pokazatelei Krovi pri Aminazinoterapii Dlitel'no Boleyushchikh Schizofreniev) tr. by Wanda M. Feeley. Mar 61, 6p. PSC no. 60-1455.
Order from OTS or SLA $1.10 62-24312

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1960, v. 60, p. 220-223.

DESCRIPTORS: *Blood, *Chlorpromazine, Therapy, *Psychoses, Drugs, Leukocytes, Erythrocytes, *Body temperature, Tranquilizing agents, CNS depressants.

The changes in the blood of 30 schizophrenic patients receiving aminazine (chlorpromazine) were studied. One half the patients received the drug intramuscularly. The other half were given tablets orally. Blood tests were done before therapy, 4-5 times during therapy,

and 2-3 weeks after therapy. The blood studies included (1) erythrocyte sedimentation rate, (2) the number of the various types of leucocytes, (3) hemoglobin content, and (4) color index. There was a constant acceleration of the erythrocyte sedimentation rate, usually accompanied by elevation of body temperature in patients receiving the drug intramuscularly. Patients receiving the drug by mouth had no temperature elevation, and their sedimentation rate was within normal limits. Types A, B and C remissions of schizophrenia occurred in 6 of the 15 patients given the drug intramuscularly. Type D remission occurred in 4 of these patients. In 5 patients there was no evidence of clinical improvement. Of the patients receiving oral medication, 5 had type A, B and C remissions, 6 had type D. There was no effect in 4 patients. The authors found no parellelism between the hematological changes and clinical efficacy of aminazine therapy in schizophrenia. The differences in the changes in the blood in the two groups were attributed to the method of administration of the drug.

Radiobiology

RADIOBIOLOGY, 1962, VOL. 2, NO. 1. Mar 63, 267p.
Order from OTS $3.50 AEC-tr-5428

Trans. of Radiobiologiya (USSR) 1962, v. 2, no. 1, [p. 1-176]

DESCRIPTORS: *Radiobiology, Radiation effects, *Desoxyribonucleic acids, *Cholesterol, Blood serum, *Acetylcholine, X-rays, Metabolism, Gamma rays, *Yeasts, *Cells (Biology), *Thymus gland, Fishes, Tracer studies, *Adrenal glands, *Hemopoietic system, Hormones, Hypothalmus, *Epilepsy, Reflexes, *Spinal cord, *Brain, Blood circulation, *Electron microscopy, Radiation sickness, Spermatogenesis, *Microsomes, Cytochemistry, *Autonomic nervous system, Ganglia, *Radioprotective agents, *Protons, *Dextran, *Escherichia, Protozoa, Seeds, *Dosimeters, Radiological dosage, *Microwaves, *Nucleic acids.

Contents:

The pride of Russian natural sciences, by Yu. I. Solov'ev and M. V. Lomonosov

On the role of DNA supramolecular structure in cell radiation injury, by N. B. Strazhevskaya and V. A. Struchkov

Effects of whole-body-X-ray irradiation on cholesterin content in blood serum of dogs and rabbits, by E. K. Shkhinek

Some aspects in acetylcholine metabolism in rats soon after exposure to sublethal dose of gamma-rays, by N. N. Demin and N. V. Korneeva

X-radiation effect on cholesterin metabolism in dogs, by L. S. Sulaeva

Gamma-radiation effect upon DNA synthesis in isolated nuclei of thymocites, by E. V. Budilova

Biochemical mutations in torulopsis utilis induced by ionizing radiation, by E. N. Sokurova and T. M. Volkova

Main pathways of Sr^{89} migration in organism of benthos-feeding fish in a fresh-water reservoir, by G. D. Lebedeva

Some features in delayed reaction of haemopoietic system in animals which survived radiation sickness, by N. I. Shmeleva

A study of radiation effects on adrenal glands and its hormones, by B. M. Grayevskaya and R. N. Shchedrina

On the role of the hypothalamo-hypophysary system in the genesis of blood vessel permeability changes in irradiated animals, by Z. N. Nakhil'nitskaya

A study of ionizing radiation action on a model of reflectory epilepsy, by A. F. Semiokhina

Analysis of the influence of the hypothalamus on spinal reflex dynamics after local irradiations, by Z. M. Gvozdikova

Regulation of cerebral blood circulation in irradiated animals, by R. M. Lyubimova-Gerasimova

Electron microscopic structure of blood platelets in dogs during the acute radiation syndrome, by A. A. Totskaya and others

On radiosensitivity of loach (Misgurnus Fossilis L.) spermatozoa, by E. D. Bakulina and others

Early ultrastructural changes in mitochondria of lymphocites in irradiated animals, by V. M. Manteifel and M. N. Meisel

Periodicity of cytochemical changes in ribonucleoproteids in cells of the central nervous system during latent period and early radiation syndrome, by A. L. Shabadash and others

Ganglia of the peripheral nervous system in γ-irradiated guinea pigs, by O. A. Danilova

Action of radioprotectors on sorption properties of tissues in irradiated animals, by A. S. Mochalina and L. L. Khamaide

A study of biological protection against irradiation with high energy protons, by S. P. Yarmonenko and others

Influence of various dextran preparations on the survivability of mice during the acute radiation syndrome, by A. A. Bagdasarov and others

Influence of preliminary immunization with living and dead E. Coli cells on radioresistance of animals, by N. N. Klemparskaya and N. V. Raeva

Beneficial effect of shielding of nonhaemopoietic organs on haemopoiesis restoration in irradiated animals, by N. F. Barakina

A study of radioprotective action of some substances on protozoa, by E. Ya. Graevskii and others

Radioprotective action of 5-methoxytryptamine and other alkoxytryptamines, by I. G. Krasnykh and others

Conditions revealing latent damage in DNA structure in gamma-irradiated seeds, by V. I. Tokarskaya

Dose distribution along the axis of plane beta-applicator. II. Multicomponent medium, by V. E. Yakhontova and others

Influence of non-thermal microwave radiation on the survivability of gamma-irradiated animals, by A. S. Presman and N. A. Levitina

Scientific-Method Conference on the Results and Outlooks in the Study of the Role of Nucleic Acid Damage in the Genesis of Radiation Syndrome [May 61, Moscow].

RADIOBIOLOGY, 1962, VOL. 2, NO. 3. Mar 63, 264p.
Order from OTS $3.50 AEC-tr-5430

Trans. of Radiobiologiya (USSR) 1962, v. 2, no. 3, p. 337-511.
##Another trans. of p. 442-449 is available from OTS or SLA as 63-19253, FTD-TT-63-163, 18 Mar 63 [16]p.

DESCRIPTORS: *Radiobiology, Radiation injuries, Ionization, *Desoxyribonucleic acid, Heat, Cells (Biology), Gamma rays, *Hemoglobin, *Erythrocytes, *Radiation tolerance, Catalase, *Plasma substitutes, *Muscles, Tissues (Biology), *Metabolism, Primates, *Leukocytes, X-rays, Burns, Radiation effects, *Yeasts, Polonium, Radioactive isotopes, Excretion, *Methionine, *Body fluids, *Antigen-antibody reactions, Bioelectronics, *Radioprotective agents, *Retina, Nervous system, Drugs, Blood vessels, Liver, Anesthetics, Radiation tolerances, *Plants (Botany), Genetics, *Photosynthesis, Growth, Radiological dosage.

Contents:

Andrie Vladimirovich Lebedinskii on the occasion of his 60th birthday

The role of disorders of metabolic processes in radiation injury of the cell, by A. M. Kuzin,

The effect of ionizing radiation on desoxyribonucleic acid-methylamine complexes (The problem of radiosensitive and radioresistant forms of DNA) by P. I. Tseitlin, and T. S. Usakovskaya

Some general factors in the mechanism of action of ionizing radiation and heat on DNA, by G. P. Golubeva, and others

The effect of gamma-radiation on alkaline hemin solutions, by M. I. Amiragova, and others

The relation of the electrical parameters of irradiated erythrocytes to their submicroscopic structure, by P. Yu. Vinetskii,

Correlation between the value of the oxidation-reduction potential of the hemolymph of crickets and their radiosensitivity, by G. V. Sumarukov,

The effect of polyamines on blood catalase activity of irradiated animals, by O. I. Smirnova,

The effect of vinylpyrrolidone on the biological functions of yeast cells exposed to gamma-radiation, by P. Yu. Kozlov, and A. I. Gorin

Change in the carbohydrate-phosphorus metabolism in muscle tissue under the influence of gamma-radiation, by M. P. Silaev,

Some changes in carbohydrate metabolism of monkeys with acute radiation sickness, by L. I. Polikarpova, and A. Ya. Shulyatikova

Disorder of leukocyte reactions after X-ray irradiation, by M. I. Ul'yanov,

Sex differences in radiosensitivity, byA. N. Aleksandrov and K. F. Galkovskaya

Characteristics of some early reactions to a flame burn by rats irradiated with different doses, by A. K. Arnautov, and others

Relationship of radiation injury of yeasts to their physiological condition, by E. M. Karabaev

The excretion of desoxycytidin in the urine of rats injured by polonium-210, by M. S. Uspenskaya

Change in the turnover of methionine -C^{14} in calcified tissues in acute radiation sickness, by A. A. Prokhonchukov

The role of humoral factors in the development of radiation-induced changes in the teeth and jaws, by A. A. Prokhonchukov and V. V. Panikarovskii

Effects of ionizing radiation on established antitoxic and antibacterial immunity, by O. V. Emal'yanova and E. A. Geintse

Changes in the bioelectric activity of the nervous system after X-ray irradiation and treatment with chemical protective agents, by A. M. Stashkov

Results of an investigation of the action of ionizing radiation on the retina and on some other light-sensitive systems, by G. G. Demirchoglyan and others

Soluble protein content of irradiated nerve tissue by N. F. Minaev, and A. I. Chukhrova

Changes in the reactions of the blood vessels of the brain to adrenalin, acetylcholine, and hexonium on general exposure of the whole body to ionizing radiation, by R. M. Lyubimova-Gerasimova,

The content of blood protein fractions and the state of the antitoxic function of the liver in animals irradiated repeatedly with different X-ray doses, by V. N. Slavnov,

Problem of the relation between the radiation sensitivity of the central nervous system and the susceptibility of animals to radiation injury, by N. G. Darenskaya, and A. B. Tsypin

Nature of the anti-radiation effect of anaesthetics and localization of the sensitizing action of oxygen, by V. P. Paribok, and others

The genetic radiation sensitivity of guinea pigs, by E. D. Plotnikova, and others

Investigation of radiation after-effects in plant cells in connection with problems of protection against radiation, by N. I. Shapiro, and E. M. Protopopova

The action of radioactive phosphorus-32 on photosynthesizing purple sulfur bacteria, by V. A. Lambina,

Relation between the growth rate of plants and their sensitivity to radiation, by P. G. Mamedov,

Distribution of absorbed doses emitted by a hollow cylinder source, by E. E. Kovalev, and others.

Bezverkhaya, T. P.
BUILDING UP THE RESISTENCE OF BOARDING SCHOOL STUDENTS BY ULTRAVIOLET IRRADIATION. 18 June 63, 6p. 3 refs. JPRS: 19718.
Order from OTS $0.50 63-31060

Trans. of Gigiena i Sanitariya (USSR) 1963, v. 28, no. 4, p. 94-96.

DESCRIPTORS: *Ultraviolet radiation, *Students, *Radiation effects, Public health, Sensitivity, Tolerances (Physiology), Blood.

Demirchoglyan, G. G., Allakhverdyan, M. A. and others.
RESULTS OF INVESTIGATIONS OF THE EFFECT OF IONIZING RADIATION ON THE RETINA AND CERTAIN PHOTOSENSITIVE SYSTEMS. 18 Mar 63 [16]p. 13 refs. FTD-TT-63-163. AD-401 743.
Order from OTS or SLA $1.60 63-19253

Unedited rough draft trans. of Radiobiologiya (USSR) 1962, v. 2, no. 3, p. 442-449.

DESCRIPTORS: Ionization, *Radiation effects, *Retina, Radiation sickness, *Photoreceptors, *Photosensitivity, Nervous system.

Katsnel'son, B. A., Klyachina, K. N. and others.
THE HYGIENIC SIGNIFICANCE OF NATURAL RADIOACTIVITY IN THE MINING AND CONCENTRATING OF CERTAIN RARE METAL ORES AND ITS PART IN THE DEVELOPMENT OF PNEUMOCONIOSIS. 26 June 63, 11p. 13 refs. JPRS: 19866.
Order from OTS $0.50 63-31118

Trans. of Gigiena Truda i Professional'nye Zabolevaniya (USSR) 1963, v. 7, no. 4, p. 3-9.

DESCRIPTORS: Mining engineering, *Ores (Metal sources), Radioactivity, *Radiation hazards, Particles *Uranium compounds, *Thorium compounds, *Oxides, Niobium, Zirconium, *Pathology, *Diseases, *Lungs, Personnel, Industrial medicine, Radiobiology, Radiation effects.

Maiskii, I. N., Airapet'yan, G. P. and others.
THERAPEUTIC AND CYTOTOXIC EFFECT OF ANTIBODIES AND THEIR ROLE IN THE PATHOGENESIS OF RADIATION SICKNESS. 5 July 63, 26p. 164 refs. JPRS: 20040.
Order from OTS $0.75 63-31214

Trans. of #Uspekhi Sovremennoi Biologii (USSR) 1963, v. 55, no. 2, p. 219-238.

DESCRIPTORS: Therapy, *Cells (Biology), Toxicity, Antigens and antibodies, *Antigen-antibody reactions, Etiology, *Radiation sickness

Topics include: Immunological reactions and their general importance in biology; cytotoxins and their properties; mechanism of action of cytotoxins; autoantigens and autoantibodies; and, the role of antibodies in the pathogenesis of cancer disease.

Minaev, P. F.
STUDIES ON THE EFFECT OF IONIZING RADIATION UPON THE NERVOUS SYSTEM. 23 July 63, 38p. JPRS: 20317.
Order from OTS $1.25 63-31367

Trans. of mono. Vliyanye Ioniziruyushchikh Izluchenii na Tsentral'nuyu Nervnuyu Sistemu (Effect of Ionizing Radiations Upon the Central Nervous System) Moscow, 1962, p. 5-7, 84-113, 131.

DESCRIPTORS: *Radiation effects, *Nervous system, Tissues (Biology), *Metabolism, Muscles.

Contents:
Effect of ionizing radiations upon the nervous system
Significance of the initial state of the nervous system under the effect of ionizing radiations
The nature of changes caused by the irradiation of neural tissue
Conclusion
Table of contents.

Nadareishvili, K. Sh.
THE PROBLEM OF THE IRRITATING EFFECT OF IONIZING RADIATION. 24 June 63, 12p. 21 refs. JPRS: 19806.
Order from OTS $0.50 63-31095

Trans. of Akademiya Nauk Gruzinskoi SSR [Tiflis]. Soobshcheniya, 1963, v. 30, no. 2, p. 213-220.

DESCRIPTORS: *Radiation effects, *Conditioned reflex, X rays, Respiration, Blood pressure, Dosage.

X-ray irradiation of various topographic anatomical areas of the body of rabbits, at a definite gradient of dose strength, manifests characteristics of an irritating agent in regard to certain physiological functions. Upon combination of a brief action X-rays with electrocutaneous irritation, it is possible to develop defensive conditioned reflexes to the radiation effect in total irradiation, as well as in local irradiation of the head and abdominal area. Following realization of a total dose of fractional action of X-rays equalling 50 r and more in total irradiation, and 1000 r and more in local irradiation of the head, the electro-defensive reflexes are sharply reduced or disappear completely, regardless of the fact whether the electrocutaneous reinforcement was continued or terminated. (Author)

Pavlova, E. B.
CHANGES IN THE ANTERIOR LOBE OF THE HYPOPHYSIS DURING IRRADIATION AND COOLING. 5 July 63, 7p. 12 refs. JPRS: 20037.
Order from OTS $0.50 63-31211

Trans. of Problemy Endokrinologii i Gormonoterapii (USSR) 1963, v. 9, no. 3, p. 3-7.

DESCTIPROTS: Endocrine glands, *Pituitary gland, *Radiation effects, *Hypothermia.

As established, 24 hours after the irradiation, i.e. at the period of maximal corticosterone secretion by the adrenal glands, there was a marked adrenal hypertrophy with the appearance of vacuolized delta-basophils in the anterior lobe of the hypophysis. As a result of a 3-day cooling of experimental animals there was hypertrophy of the adrenal glands, thymus involution and vacuolization of the delta-basophillic cells in the hypophysis. Similarity of the changes in the delta-basophillic cells of the anterior lobe of the hypophysis, appearing during the early postirradiational periods and as a result of coling, permits them to be regarded as a morphological manifestation of intensified ACTH secretion in response to unfavourable effects. (Author)

Piontkovskii, I. A.
EFFECTS OF IONIZING RADIATION ON THE FUNCTIONS OF THE HIGHER NERVOUS SYSTEM OF PROGENY. Mar 63, 222p. 137 refs.
Order from OTS $3.00 AEC-tr-5553

Trans. of mono. Vliyanie Ioniziruyushchego Izlucheniya na Funktsiyu Vysshikh Otdelov Tsentral'noi Nervnoi Sistemy Potomstva, Moscow, 1961.

DESCRIPTORS: Radiobiology, Ionization, *Genetics, Brain, *Cerebral cortex, X-rays, *Radiation effects, *Embryos, Conditioned reflex, Gamma rays, *Reflexes, *Electroencephalography, Anatomy, *Mutations, Blood, *Anomalies, Radiation injuries.

Contents:
Some functional and structural characteristics of the central nervous systems of animals exposed to the effect of ionizing radiation during the period of embryonic development, by I. A. Piontkovskii
Conditioned-reflex activity of white rats exposed to the effect of X-rays in the pre-implantation stage of embryonic development, by V. E. Miklashevskii and M. B. Gol'dberg
The characteristics of conditioned-reflex activity of white rats exposed to gamma-ray irradiation (Co^{60}) in the middle of the embryonic development period, by N. G. Mikhailova and V. E. Miklashevskii
Some characteristics of the higher nervous activity of rats irradiated with X-rays at the end of the second half of antenatal development, by I. A. Kolomeitseva

Higher nervous activity of adult rats irradiated daily with X-rays during the embryonic period, by V. N. Semagin

Some characteristics of unconditioned-reflex and conditioned-reflex activity during the course of ontogenesis in rabbits irradiated during the embryonic period, by R. I. Kruglikov

Some functional characteristics of the higher central nervous system centers of adult rabbits irradiated during the embryonic period, by R. I. Kruglikov

Study of the electroencephalograms of rabbits exposed to irradiation in the late period of embryogenesis, by A. M. Ivanitskii

Study of intercentral relations in the brains of rabbits exposed to X-ray irradiation during the period of embryogenesis, by A. M. Ivanitskii

Characteristics of structural changes in the central nervous systems of rats irradiated with X-rays during the period of embryogenesis, by N. I. Artyukhina

Histopathological characteristics of central nervous system changes in the late periods in white rats irradiated during the period of embryogenesis, by M. M. Aleksandrovskaya

Morphologic changes in the cortex and subcortical structures of the brains of adult rabbits irradiated with X-rays antenatally, by I. A. Chernyshevskaya

Peripheral blood changes in rats exposed to the effect of ionizing radiation in the antenatal period of development, by M. B. Gol'dberg

Surgery

ORTHOPEDICS, TRAUMATOLOGY, AND PROSTHETICS, 1963, VOL. 24, NO. 4: [SELECTED] TRANSLATIONS. 12 July 63, 38p. JPRS: 20147.
Order from OTS $1.00 63-31268

Trans. of Ortopediya, Travmatologiya i Protezirovanie (USSR) 1963, v. 24, no. 4, p. 49-66.

DESCRIPTORS: *Orthopedics, *Surgical trauma, *Prosthetics, Paralysis, Ribs, Shoulder, Wounds and injuries, Nerve cells, *Arms, *Fractures (Bone), Electricity, *Tumors, Bone, *Dislocations, Joints (Physiology), Musculoskeletal system.

Contents:

A stabilizing operation in paralytic scoliosis and pelvic distortion, by V. I. Nikolaev

An unusual location of the accessory cervical rib, by A. I. Chang

Mechanism of injuries to the brachial plexus accompanying radial fractures with typical localization, by V. M. Pigin

A case of successful restoration of the hand and forearm, by N. S. Shishikin

Experience in intraosseous osteosynthesis with metal nails in fractures of the clavicle, by E. Kh. Liyv

Surgical treatment of dislocations of the acromial end of the clavicle, by T. N. Khomyak

Clinical electroencephalographic parallels in patients suffering from so-called "light" electric trauma, by O. M. Val'chur and V. V. Efimov

Certain morphological changes in primary bone tumors, by A. Z. Amelin.

SURGICAL TREATMENT OF FRACTURES, TUMORS, AND LIGAMENTS. 9 July 63, 66p. 92 refs. JPRS: 20097.
Order from OTS $1.75 63-31241

Trans. of Khirurgiya (USSR) 1963 [v. 39] no. 5, p. 6-18, 25-29, 36-40, 77-80, 98-111, 118-121.

DESCRIPTORS: Orthopedics, Musculoskeletal system, *Surgery, *Fractures (Bones), *Tumors, *Joints (Physiology), Cells, (Biology), *Transplantation, *Bone, Prosthetics, *Femur, Arms, Suppurative infections, Skin, *Plastic surgery, Tuberculosis, Legs, Excision, *Cancer.

Contents:

Giant cell tumors and their characteristics, by I. G. Lagunova

Bone grafting with autologous spongy bone, by S. O. Portugalov and S. G. Girshin

Osteosynthesis with a metal pin in the treatment of long bone fractures, by Ya. G. Dubrov

Complications and mortality rate in patients with trochanteric fractures of the femur, by Ya. P. Bakycharov

Treatment of fracture of the clavicle in children, by I. I. Fetisenko

Injury to the lumbar interspinal ligaments, by I. A. Movshovich

Characteristics of the postoperative period in patients with suppurative diseases of the fingers and hand, by L. G. Fishman

The problem of treatment and prophylaxis of suppurative diseases of the fingers and hand, by D. A. Lutsenko

Primary skin grafting in injuries of the fingers, by V. A. Dudin

Remote results of economic resection for tuberculosis of the knee joint, by A. N. Shirochin

Remote result of interillioabdominal amputation for oseogenic sarcoma of the thigh, by L. N. Trubaeva

English summaries of articles.

Konstantinov, V. A., Kochetygov, N. I., and Kovalenko, P. P.
PRECALCULATED BURN DOSE IN AN EXPERIMENT [AND] TRANSPLANTATION OF FROZEN BONE HOMOGRAFTS IN EXPERIMENTAL PSEUDOARTHROSIS. 10 July 63, 7p. 8 refs. JPRS: 20102.
Order from OTS $0.50 63-31245

Trans. of Eksperimental'naya Khirurgiya i Anesteziologiya (USSR) 1963, v. 8, no. 2, p. 30-31, 46-47.

DESCRIPTORS: Wounds and injuries, *Burns, Medical research, *Transplantation, Plastic surgery, *Bones, Joints (Physiology), *Fractures (Bone).

Zubovich, V. S.
AMNIOTIC MEMBRANES IN THE TREATMENT OF THERMAL SKIN BURNS IN CHILDREN. 10 July 63, 3p. JPRS: 20105.
Order from OTS $0.50 63-31248

Trans. of Zdravookhranenie Belorussii (USSR) 1963, v. 9, no. 4, p. 71-72.

DESCRIPTORS: *Fetal membranes, *Burns, Children, *Plastic surgery, Tissues (Biology).

Zoology

MANAGEMENT OF FISHERIES AND DYNAMICS OF FISH POPULATIONS. 18 June 63, 46p. 51 refs. JPRS: 19711.
Order from OTS $1.25 63-31056

Trans. of [Akademiya Nauk SSSR]. Ikhtiologicheskaya Komissiya. Trudy Soveshchanii, 1961, no. 13, p. 5-6, 44-46, 487-495.

DESCRIPTORS: *Fishes, Marine biology, *Reproduction, Aquatic animals, Symposia, Rhythm (Biology), Ecology.

Contents:
Opening address at Conference on the Dynamics of Fish Populations, by P. A. Moiseev
Biological basis of the rational conduct of fishing, by L. S. Berdichevskii
Resolution of the Conference on the Dynamics of Fish) Populations
Table of contents

PROBLEMS OF ICHTHYOLOGY, 1962, NO. 1(22): [SELECTED] TRANSLATIONS. 20 June 63, 72p. 157 refs. JPRS: 19772.
Order from OTS $2.00 63-31085

Trans. of Voprosy Ikhtiologii (USSR) 1962, no. 1(22) p. 3-17, 104-105, 116-126, 169-173, 192-196.

DESCRIPTORS: *Fishes, Marine biology, Siberia, *Radiation injuries, Sex glands, *Carp, Reproduction, Aquatic animals, *Hydroelectric power systems, *Rhythm (Biology), *Salmonidae, Food.

Contents:
Biological fishery research in Siberia, by B. G. Ioganzen
Radiation injury to carp gonads, by N. V. Cherfas
Breeding of Vimba Vimba Carinata (Rallas) in the Dnieper after construction of the Kakhovskaya Hydroelectric Station, by V. I. Vladimirov
Feeding of young salmon (Salmo Salar L.) raised in ponds in early developmental stages, by I. B. Bogatova
Numbers of migratory fish in relation to hydroelectric construction, by Yu. A. Mitrokhin and others.

SOVIET FISHERY RESEARCH: [SELECTED] TRANSLATIONS. 8 July 63, 52p. 83 refs. JPRS: 20049.
Order from OTS $1.50 63-31218

Trans. of mono. Sbornik Dokladov na II Plenume Komissii po Rybokhozyaystvennomu Issledovaniyu Zapadnoi Chasti Tikhogo Okeana (Collection of Reports of the Second Plenary Session of the Commission on Fisheries Research in the Western Pacific Ocean, ed. by P. A. Moiseev) Moscow, 1962, p. 2, 5-25, 140-148, 160-169.

DESCRIPTORS: *Fishes, Scientific research, Marine biology, Pacific Ocean, *Dams, Genetics, *Mutations, *Cyprinidae.

Contents:
Table of contents
Biological basis of fisheries in the Western Pacific Ocean, by P. A. Moiseev
Formation of fish resources in reservoirs of the USSR, by P. A. Dryagin
Hybridization of carp with wild carp (Cyprinus Carpio L.) by V. S. Kurpichnikov.

ZOOLOGICAL JOURNAL, 1963, VOL. 42, NO. 4: [SELECTED] ARTICLES. 17 July 63, 17p. 12 refs. JPRS: 20207.
Order from OTS $0.50 63-31306

Trans. of Zoologicheskii Zhurnal (USSR) 1963, v. 42, no. 4, p. 546-550, 618-620, 637-638.

DESCRIPTORS: *Animals, *Biology, Radioactive isotopes, *Ecology, *Siphonaptera, *Pulicidae, *Ammodytidae, Fishes, Marine biology, Tracer studies, *Birds, Benthos

Contents:
The use of radioactive isotopes for the study of the ecology of fleas. I. Alimentary relations of fleas of the genus Xenopsylla with large sand eels (Ammodytidae) under natural conditions, by G. G. Sviridov and others
Laws of the composition of marine benthonic biocenoses, by A. A. Neiman
All Union Ornithological Conference (no. 3) L'vov, Sep 62, by G. P. Dement'ev and others.

Azbelev, V. V.
INFORMATION ON THE BIOLOGY AND SURVIVAL OF SALMON OF THE KOLA PENINSULA (Materialy po Biologii Semgi Kolskogo Poluostrova i Ee Vyzhivaemosti) tr. by W. E. Ricker. Apr 63, 19p. (figs. tables omitted). FRBC Trans. Series No. 440.
Order from NRCC NRCC C-4439

Partial trans. (p. 5-9, 19-27, 51-65) of Polyarnyi Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii. Trudy (USSR) 1960, v. 12, p. 5-70.

DESCRIPTORS: Biology, *Salmonidae, Ecology, Marine biology, *Fishes, Rhythm (Biology).

Berenbeim, D. Ya. and Probatov, A. N.
THE MOST PROMISING FISHING REGIONS ACCORDING TO THE DATA OF OCEANOLOGICAL RESEARCH. 21 June 63, 8p. 21 refs. JPRS: 19785.
Order from OTS $0.50 63-31089

Trans. of Okeanologiya (USSR) 1963, v. 3, no. 2, p. 308-312.

DESCRIPTORS: *Fisheries, Determination, Fishes, Scientific research, Atlantic Ocean, *Oceanology.

Boiko, E. G.
BASIC FACTORS IN THE FLUCTUATIONS OF THE STOCKS OF STURGEONS AND LESSER FISHES IN THE SEA OF AZOV (Osnovnye Faktory Kolebaniya Zapasa Chastikovykh i Osetrovykh Ryb Azovskogo Morya) tr. by W. E. Ricker. Jan 63 [13]p. FRBC Trans. Series no. 414.
Order from NRCC NRCC C-4443

Trans. of Akademiya Nauk SSSR. Ikhtiologicheskaya Kommissiya. Trudy Soveshchanii, 1961, no. 13, p. 147-157 (Trudy Soveshchanie po Dinamike Chislennosti Ryb, 1960).

DESCRIPTORS: *Acipenseridae, *Fishes, *Reproduction (Physiology), Fisheries, Population, Growth.

Chugunova, N. I.
AGE AND GROWTH STUDIES IN FISH: A SYSTEMATIC GUIDE FOR ICHTHYOLOGISTS, tr. by D. Yasski. 1963, 132p. 155 refs. PL-480 Int.
Order from OTS $1.50 61-31036

Trans. of mono. Rukovodstvo po Izucheniyu Vozrasta i Rosta Ryb, Moscow, 1959 [164p.].

DESCRIPTORS: *Age, Growth, *Fishes, Marine biology, Bone, Ear, Morphology.

Contents:
Collection of material for the study of the age and growth of fish
The scale method for age determination and the interpretation of spawning and supernumerary rings (checks)
Determination of the age of fish from bones and otoliths
Calculation of the age composition and the rate of maturation of a fish catch
Study of the growth of fish
Determination of the age composition of catches and the growth of fish by the length frequency method
Calculation of fish growth characteristics.

Kamyshnaya, M. S.
ON THE BIOLOGY OF THE HYBRID BETWEEN CHUM AND PINK SALMON: ONCORHYNCHUS KETA (WALBAUM), INFRAS. AUTUMNALIS BERG × O. GORBUSCHA (WALBAUM) --- FAMILY SALMONIDAE (O Biologii Gibrida Kety i Gorbushi Oncorhynchus keta (Walbaum), Infrasp. Autumnalis Berg × O. Gorbuscha (Walbaum) Sem. Salmonidae) tr. by R. E. Foerster. 1962 [4]p. (fig. omitted) 3 refs. FRBC Trans. Series no. 403.
Order from NRCC NRCC C-4446

Trans. of Nauchnye Doklady Vysshei Shkoly. Biologicheskie Nauki (USSR) 1961, no. 4, p. 29-33.

DESCRIPTORS: *Salmonidae, *Fishes, *Growth, *Anatomy, Morphology,

Krogius, F. V.
ON THE RELATION BETWEEN RATE OF GROWTH AND POPULATION DENSITY IN SOCKEYE SALMON (O Svyazyakh Tempa Rosta i Chislennosti Krasnoi) tr. by R. E. Foerster. 1962 [23]p. 21 refs. FRBC Trans. Series no. 411.
Order from NRCC NRCC C-4447

Trans. of Akademiya Nauk SSSR. Ikhtiologicheskaya Kommissiya. Trudy Soveshchenii, 1961, no. 13, p. 132-146 (Trudy Soveshchanie po Dinamike Chislennosti Ryb, 1960).

DESCRIPTORS: *Salmonidae, *Fishes, *Growth, Body weight, *Distribution, Reproduction (Physiology), Plankton.

Lestev, A. V.
THE TRAWL FISHERY FOR ROCKFISH IN THE BERING SEA, tr. by W. E. Ricker. 1963 [15]p. FRBC Trans. Series No. 439.
Order from NRCC NRCC C-4450

Trans. of mono. Tralovyi Lov Okunya v Beringovom More, Moscow, 1961, 26p.

DESCRIPTORS: *Fishes, Marine biology, Bering Sea, Boats, *Scorpaenidae.

Lyubimova, T. G.
ROCKFISH IN THE GULF OF ALASKA (O Morskom Okune Zalive Alyaska) tr. by W. E. Ricker. 1963 [4]p. FRBC Trans. Series No. 441.
Order from NRCC NRCC C-4451

Trans. of Rybnoe Khozyaistvo (USSR) 1961, v. 37, no. 9, p. 27-30.

DESCRIPTORS: *Scorpaenidae, *Fishes, *Gulf of Alaska, Distribution, Fisheries.

Mankevich, E. M.
BIOLOGICAL CHARACTERISTICS OF THE SEPARATE GROUPS OF THE BARENTS SEA COD. 1962 [15]p. (figs. omitted) 49 refs. [DSIR] NLL M.10003.
Order from OTS or SLA $1.60 63-15207

Trans. of mono. [Sovetskie Rybokhozyaistvennye Issledovaniya v Moryakh Evropeiskogo Severa] (Soviet Fisheries Investigations in North European Seas) Moscow, 1960, p. 253-266.

DESCRIPTORS: Morphology, Taxonomy, *Cod, *Fishes, Marine biology, Barents sea.

Nikol'skii, G. V.
ICHTHYOLOGY IN THE CHINESE PEOPLE'S REPUBLIC. 5 July 63, 29p. (figs. omitted) 55 refs. JPRS: 20030.
Order from OTS $0.75 63-31207

Trans. of Zoologicheskii Zhurnal (USSR) 1956, v. 35, no. 11, p. 1747-1764.

DESCRIPTORS: *Fishes, Marine biology, China.

Nikonorov, I. V. and Pateev, A. Kh.
CATCHING KILKA WITH A FISH PUMP USING UNDERWATER ILLUMINATION AND A PULSING ELECTRIC CURRENT (Lov Kil'ki Rybonasosom pri Podvodnom Osveshchenii s Primeneniem Impul'snogo Toka) tr. by W. E. Ricker. 1963 [8]p. FRBC Trans. Series No. 445.
Order from NRCC NRCC C-4455

Trans. of Rybnoe Khozyaistvo (USSR) 1959, v. 35 [no. 7] p. 53-58.
Another trans. is available from LC or SLA mi$2.40, ph$3.30 as 60-17117, Oct 59 [15]p.

DESCRIPTORS: *Clupeidae, *Fishes, *Fisheries, Pumps, *Underwater illumination, *Electric currents, Electric potential.

Privolnev, T. I.
PHYSIOLOGICAL ADAPTATIONS OF FISHES TO NEW CONDITIONS OF EXISTENCE (Fiziologicheskie Prisposobleniya u Ryb k Novym Usloviyam Sushchestvovaniya) tr. by W. E. Ricker. Jan 63, 10p. 6 refs. FRBC Trans. Series no. 422.
Order from NRCC NRCC C-4458

Trans. of Akademiya Nauk SSSR. Ikhtiologicheskaya Kommissiya. Trudy Soveshchanii, 1954, no. 3, p. 40-49 (Trudy Soveshchaniya po Probleme Akklimatizatsii Ryb i Kormovykh Bespozvonochnykh, 1952).

DESCRIPTORS: *Fishes, *Ecology, *Metabolism, *Adaptation (Physiology), Oxygen, Thresholds (Physiology).

Rass, T. S.
DEEPSEA FISHES OF THE FAR-EASTERN SEAS; THE DEEPWATER FISHES OF THE KURILE KAMCHATKA TRENCH; FISHES FROM THE GREATEST DEPTHS, tr. by Laurence Penny. [1962] 10p. 7 refs.
Order from OTS or SLA $1.10 62-25064

Trans. of Priroda (USSR) 1953 [v. 42] no. 2, p. 107-110; 1958 [v. 47] no. 7, p. 107-108; [Akademiya Nauk SSSR. Zoologicheskii Institut. Trudy Problemnykh i Tematicheskikh Soveshchanii] 1956, v. 6, p. 2.

DESCRIPTORS: *Marine biology, *Fishes, Asia, Oceans, Taxonomy, Ecology.

Savvaitova, K. A.
ON THE FOOD OF FAR-EASTERN CHARS (O Pitanii Dalnevostochnykh Goltsov) tr. by R. E. Foerster. 1962, 4p. FRBC Trans. Series No. 423.
Order from NRCC NRCC C-4460

Trans. of Rybnoe Khozyaistvo (USSR) [1961, v. 37, no. 1] p. 9-11.

DESCRIPTORS: *Fishes, *Salmonidae, Morphology, Feeding, Eggs, Plants (Botany), Insects, Mollusca.

Sorokin, V. P.
MIGRATIONS OF THE REDFISH (SEBASTES MENTELLA TRAVIN) OF THE BEAR ISLAND-SPITSBERGEN STOCK. 1962 [15]p. (figs. omitted) 10 refs. [DSIR] NLL M.10005.
Order from OTS or SLA $1.60 63-15208

Trans. of mono. [Sovetskie Rybokhozyaistvennye Issledovaniya v Moryakh Evropeiskogo Severa] (Soviet Fisheries Investigations in North European Seas) Moscow, 1960, p. 285-298.

DESCRIPTORS: *Fishes, Marine Biology, Distribution.

Svetovidov, A. N.
FISHES, VOL. 2, NO. 1: CLUPEIDAE (THE HERRINGS) (Ryby, v. 2, no. 1: Clupeidae (Sel'devye) tr. by Z. Krauthamer and E. Roifer. 1963, 428p. PL-480 Smi.
Order from OTS $4.25 61-11435

Trans. of Fauna S.S.S.R. Novaya Seriya, 1952, v. 48.

DESCRIPTORS: *Fishes, *Taxonomy, *Clupeidae, Morphology, *Anatomy, Ecology, Distribution.

Yanulov, K. P.
LOCAL REDFISH STOCKS IN THE NEWFOUNDLAND AND LABRADOR REGIONS. 1962 [12]p. (figs. omitted) 10 refs. [DSIR] NLL M.10004.
Order from OTS or SLA $1.60 63-15209

Trans. of mono. [Sovetskie Rybokhozyaistvennye Issledovaniya v Moryakh Evropeiskogo Severa] (Soviet Fisheries Investigations in North European Seas) Moscow, 1960, p. 299-307.

DESCRIPTORS: *Fishes, Marine biology, Distribution, Labrador, Newfoundland.

Zambriborshch, F. S.
ON SOME ANATOMICAL FEATURES OF THE BLACK SEA GREY MULLET (O Nekotorykh Anatomicheskikh Priznakakh Chernomorskikh Kefalei) tr. by V. A. Solodukhin. [1963] [17]p. (foreign text included) 12 refs. CSIRO Trans. no. 5980.
Order from OTS or SLA $1.60 63-19148

Trans. of Zoologicheskii Zhurnal (USSR) 1951, v. 30, no. 2, p. 143-148.

DESCRIPTORS: Anatomy, *Fishes, Black Sea, Aquatic animals.

Zemskaya, K. A.
ON THE EFFECT OF FEEDING CONDITIONS AND ABUNDANCE OF SPAWNERS ON THE AMOUNT OF PROGENY PRODUCED BY CASPIAN BREAM (O Vliyanii Nagula i Cheslennosti Proizvoditelei na Velichinu Potomstva Kaspiiskogo Leshcha) tr. by W. E. Ricker. 1963 [10]p. 11 refs. FRBC Trans. Series no. 438.
Order from NRCC NRCC C-4466

Trans. of Akademiya Nauk SSSR. Ikhtiologicheskaya Kommissiya. Trudy Soveshchanii, 1961, no. 13, p. 307-313 (Trudy Soveshchanie po Dinamike Chislennosti Ryb, 1960).

DESCRIPTORS: *Cyprinidae, *Fishes, *Feeding, Food, *Reproduction (Physiology).

CHEMISTRY

ACTA CHIMICA SINICA, 1959, VOL. 25, NOS. 1-6: TABLE OF CONTENTS AND SELECTED ABSTRACTS, tr. by N. H. Ng. Chinese (Mainland) Science and Technology Journals: Translated Table of Contents, Chemistry 1, on Contract AF 19(604)8505. July 62 [85]p. Emmanuel Coll. Research Language Center rept. no. Chem. 1.
Order from OTS or SLA $8.10 63-15758

Trans. of table of contents and selected abstracts of Hua Hsüeh Hsüeh Pao (Chinese People's Republic) 1959 v. 25, nos. 1-6.

DESCRIPTORS: *Chemistry, *Abstracts, *China, *Physical chemistry, *Chemical analysis, *Pharmacology, *Organic compounds, Synthesis, *Crystal structure, Electrochemistry, Stereochemistry, Reaction kinetics, Biochemistry, Minerals, Complex compounds.

THE CHEMISTRY AND USE OF ORGANOPHOSPHORUS COMPOUNDS: TRANSACTIONS OF THE FIRST CONFERENCE 8-10 DEC 55. 28 June 63, 902p. JPRS: 19933.
Order from OTS $10.00 63-31158

Trans. of Khimiya i Primenenie Fosfororganicheskikh Soedinenii (Trudy Pervoi Konferentsii 8-10 Dek 55 G.) Moscow, 1957.

DESCRIPTORS: *Phosphorus compounds (Organic), Chemistry, *Stereochemistry, *Insecticides, *Phosphites, Alkyl radicals, Phosphorus compounds, Chlorides, *Amines, *Lubricants, Oils, *Additives, *Phosphoric acids, *Phosphinic acids, *Phosphates, *Phosphinous acids, Esters, Aldehydes, Ketones, *Ethyleneamines, *Imines, Halides, *Amino acids, Imides, *Biochemistry, *Cholinesterase inhibitors, *Pharmacology, Thio radicals, *Salivary glands, *Intestines, Glands, Secretion, *Parasympathomimetic agents, *Asthma, *Paralysis, Therapy, Molecular structure, *Parasympatholytic agents, *Pest control, *Insects, *Plants (Botany), *Hemiptera, *Diptera, Culicidae, *Arachnids, *Ticks, *Mites, *Cotton, *Cereals, *Trematodes, Parasitic infections.

Contents:

Preface
Introductory word, by A. E. Arbuzov
The history of organic derivatives of phosphorus, by B. A. Arbuzov
Tautomerism of some organophosphorus compounds, by M. I. Kabachnik
Fiftieth anniversary of Arbuzov's rearrangement, by L. V. Nesterov
Exploratory studies of the scientific research institute for fertilizers, insecticides and fungicides in the field of organophosphorus insecticides, by N. N. Mel'nikov
Intermediate products in Arbuzov's rearrangement, by B. A. Arbuzov and others
Potentiometric study of the tautomerism of organophosphorus compounds, by S. T. Ioffe
Interaction of trialkyl phosphites with some organic acids and their anhydrides, by Gil'm Kamai and V. A. Kukhtin
Reaction of phosphorus pentachloride with acid amines, by A. V. Kirsanov
The use of organophosphorus compounds for improvement of the quality of lubricating oils, by P. I. Sanin and others
Application and mechanism of action of the organophosphorus compounds as wear resistant oil additives, by G. V. Vinogradov
Studies in the field of organophosphorus insecticides, by T. A. Mastryukova
Esters and ester amides of phosphoric, thiopyrophosphoric, dithiophosphoric acids and some of their properties, by P. I. Alimov and others
Esters of β-ketophosphinic acids and some of their properties by B. A. Arbuzov and V. S. Vinogradova
Preparation of dialkyl chlorothiophosphates, by N. N. Mel'nikov and Ya. A. Mandel'baum
Biologically active alkylated esters and mixed esters of alkylphosphinic acids, by A. I. Razumov and others
Esters of alkylphosphinous and dialkylphosphinic acids and their biological activity, by A. I. Razumov and others
Condensation of dialkylphosphorous acids with substituted aldehydes and ketones, by V. S. Abramov
Synthesis of some esters of α-dialkylphosphono-β, β1, β2-trichloroethylphosphoric acid and derivatives of pyrophosphoric aicd, by K. V. Nikonorov and others
A study in the field of derivatives of unsaturated phosphinic acids, by K. N. Anisimov and N. E. Kolobova
Organophosphorous derivatives of ethylenimine, by N. P. Grechkin
Anomaly of reactions of α-halogen ketones with esters of phosphorous acid, by A. N. Pudovik
Synthesis and study of properties of aminoalkylphosphinic acids, by T. Ya. Medved'
Imides of acids of phosphorus, by V. A. Gilyarov
Mechanism of action of anticholinesterase substances and their practical application in medicine, by M. Ya. Mikhel'son
Alkyl pyrophosphates and their pharmacological and toxicological properties, by B. B. Shugaev
Pharmacological and toxicological properties of thiophosphorus compounds, by I. A. Reut
The effect of organophosphorus compounds on salivation and intestinal secretion, by T. Yu. Il'yuchenok
The effect of anticholinesterase (organophosphorus and others), cholinomimetric and cholinolytic substances on the higher nervous activity of man and animals, by M. Ya. Mikhel'son and others
The action of some organophosphorus insecticides on the higher nervous activity of cholinesterase, by E. I. Spynu
Treatment of experimental paralyses with tetraethyl monothiophosphate, by M. M. Lenkevich
Experimental therapy of bronchospasm caused by anticholinesterase substances and the search for drugs to treat bronchial asthma, by E. N. Uspenskaya and L. G. Magazanik
Relationship of toxicity and anticholinesterase properties to chemical structure in the di-dialkylphosphate alkylamide series, by N. A. Frankov
Toxic and pharmacologic properties of pyrophos as compared with phosphacol, by V. N. Salyaev
Toxicologic and hygienic characteristics of octamethyl, by V. S. Buryi
Experimental data on the toxicology of organic phosphorus insecticides and therapy of poisoning by them, by Y. S. Kagan
Toxicologic evaluation of the organic phosphorus insecticide metaphos, by I. T. Brakhnova

Investigation of organic phosphorus insecticides of intraplant action to protect crops from pentatomids, by N. V. Sazonov
Insecticidal properties of certain organic phosphorus compounds, by D. M. Paikin and others
Effect of organic phosphorus compounds on blood-sucking diptera - mosquitoes and horseflies, by M. I. Volkova
Acaricidal action of organic phosphorus compounds against pasture ticks of the genus dermacentor, by V. A. Evdokimov
New organic phosphorus compounds - insecticides with intraplant action, by E. A. Polrivskii and A. S. Sedykh
Review of research on organic phosphorus compounds for use against subtropical crop pests, by P. I. Mitrofanov

Review of and outlook for the use of systemic insecticides to protect cotton from suctorial pests, by E. N. Kozlova
Organic phosphorus compounds to protect cotton from damage by suctorial pests, by S. A. Zhuravskaya
Use of mercaptophos and octamethyl to control suctorial pests of cotton, by V. A. Bogolyubova and M. R. Stempnevskaya
Experiments with organic phosphorus compounds of intraplant action to protect corn shoots from pests, by D. M. Paikin and I. D. Shapiro
The insecticidal and toxicological properties of octamethyl, by T. E. Izotova and others
Fillers for organic phosphorus dusts used to control pentotomids, by D. M. Paikin and N. M. Gamper
New organic phosphorus compounds to control fasciolliasis in animals, by S. V. Funnikova
Results of tests of M-74 and mercaptophos against suctorial pests in the orchard and greenhouse, by M. P. Shabanova and L. F. Efimova
Octamethyl and the enemies of the citrus red spider, by E. M. Stepanov.

Dubovenko, L. I.
INVESTIGATION OF GALLIUM OXALATES. [1963] 10p. 7 refs.
Order from OTS or SLA $1.10 63-14463

Trans. of Ukr[ainskii] Khim[icheskii] Zhur[nal] (USSR) 1962, v. 28 [no. 6] p. 675-681.

DESCRIPTORS: *Gallium compounds, *Oxalates, *Complex compounds, *Dissociation, Hydrogen ion concentration.

Composition of gallium oxalate complexes were studied in acidic media by the isomolar series method. It was demonstrated that for pH $\leq$ 1 the simplest complex, $GaC_2O_4^+$, is formed. When hydrogen ion concentration is reduced, formation of complexes with a higher coordination number is observed. Thus, for pH $\geq$3, the dominat complex is $Ga(C_2O_4)_2^-$. Dissociation constant of the gallium mono-oxalate complex was determined by studying ultra-violet light-absorption. It is equal to 5.85×10^{-9}. A similar value was obtained by studying equilibrium with thiocyanide and salicylate complexes of iron. The higher-order dissociation constants of di- and tri-oxalate complexes of gallium were computed at 3.06×10^{-6} and 3.30×10^{-2} respectively, and total dissociation constant of the coordination-saturated complexion $Ga(C_2O_4)_3^{3-}$ was found to be 5.81×10^{-16}. (Author)

Ekenstam, Alf af.
ON THE BEHAVIOR OF CELLULOSE IN SOLUTIONS OF MINERAL ACIDS. I. THE DETERMINATION OF THE MOLECULAR WEIGHT IN PHOSPHORIC ACID SOLUTION. [1963] 10p. 10 refs.
Order from SLA $1.10 63-14220

Trans. of [Chemische] Berichte (Germany 1936, v. 69, p. 549-552.

DESCRIPTORS: *Cellulose chemistry, *Cotton, Cellulose, Solutions, Molecular weight, Determination, Viscosity, *Phosphoric acids.

Ekenstam, Alf af.
ON THE BEHAVIOR OF CELLULOSE IN SOLUTIONS OF MINERAL ACIDS. II. KINETIC STUDY OF THE HYDROLYSIS OF CELLULOSE IN ACID SOLUTIONS. [1963] 16p. 8 refs.
Order from SLA $1.60 63-14221

Trans. of [Chemische] Berichte (Germany) 1936, v. 69, p. 553-559.

DESCRIPTORS: *Cellulose chemistry, *Cotton, *Paper, Cellulose, Solutions, Hydrolysis, Reaction kinetics, Heat of activation, Viscosity, *Phosphoric acids, *Sulfuric acid.

(See also 63-14220)

Fierz-David, Edward and Hannig, Max.
ON THE DISTILLATION OF CELLULOSE, WOOD, AND SIMILAR SUBSTITUTES IN THE PRESENCE OF HYDROGEN WITH CATALYST. [1963] 46p. 10 refs.
Order from SLA $4.60 63-14151

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1925, v. 8, p. 900-923.

DESCRIPTORS: *Cellulose, *Wood, Distillation, *Hydrogen, Catalysts, Starches, Lignin, *Alcohols.

Freudenberg, Karl and Blomqvist, Gunnar.
THE HYDROLYSIS OF CELLULOSE AND ITS OLIGOSACCHARIDES. [1963] 34p. 31 refs.
Order from SLA $3.60 63-14219

Trans. of [Chemische] Berichte (Germany) 1935, v. 68, p. 2070-2083.

DESCRIPTORS: *Cellulose chemistry, Cellulose, *Saccharides, Hydrolysis, Reaction kinetics, Molecular rotation, *Sulfuric acid.

Grasser, G. and Nagahama, T.
THE REDUCTION OF BICHROMATE TO BASIC CHROME SALTS. [1963] 13p. 2 refs.
Order from SLA $1.60 63-14385

Trans. of Hokkaido U. Faculty of Agriculture. Journal (Japan) 1928, v. 24, no. 1, p. 25-38.

DESCRIPTORS: Potassium compounds, *Chromates, Reduction, *Chromium compounds, Salts, Sulfuric acid, Hydrochlochloric acid, Formic acids, Acetic acids, Glucose, Glycerols, Methanols, Formaldehyde. Dextrins, Lactic acid, Sodium compounds, Sulfides Sulfites, Thiosulfates, Tannic acids, Tartrates

Hoeger, K. J.
THE PRODUCTION OF SYNTHETIC TOBACCO LEAVES FROM TOBACCO WASTE. [1963] 23p. (figs. tables equations omitted).
Order from SLA $2.60 63-14371

Trans. from unidentified mono. Karlsruhe, 1959.

DESCRIPTORS: *Tobacco, Production, Plants (Botany), *Wastes (Industrial), *Pectins, *Cellulose, Foils, Esters, Adhesives.

Experiments were conducted to regenerate a tobacco leaf from tobacco scrap, which could be used as inner wrapper in cigars. The binder to be used originates in the tobacco itself. About 6% pectin was successfully isolated from tobacco dust. The quantity of pectin isolated from tobacco dust is not adequate to bind all the extracted tobacco dust in one coherent firm foil. A usable adhesive was obtained by direct carboxymethylization of cellulose contained in the tobacco plant. Synthetic inner wrappers produced with its help are distinguished by a pleasant taste of the smoke, good burning qualities and high mechanical strength. (Author)

Shevchenko, V. B. and Shmidt, V. S.
EXTRACTION OF RUTHENIUM AND SOME OTHER FISSION PRODUCTS BY TRI-N-OCTYLAMINE FROM NITRIC ACID SOLUTIONS. [1962] 14p. 27 refs.
Order from OTS or SLA $1.60 AEC-tr-4840

Trans. of #Radiokhimiya (USSR) 1961, v. 3, p. 211-128.

DESCRIPTORS: *Ruthenium, *Solvent extraction, *Fission products, Solutions, *Nitric acid *Amines.

Examination of the fission products (Cs, Sr, Ce(III), Zr + Nb, and Ru) showed that only ruthenium is readily extracted by TOA from nitrate solution. Of the different compounds of ruthenium that probably exist in nitric acid solution, the most readily extracted by TOA is a nitroso complex. Comparison of the various elements extracted by TOA from nitric acid solutions shows that elements are more extractable by this reagent whose ions have a greater tendency to complex with NO_3 - ions in water solution. It is shown that the distribution coefficients of nitrosyl ruthenium in extraction by $TOA \cdot HNO_3$ are much higher at low acidities and significantly lower at higher nitric acid concentrations in the aqueous phase. The distribution coefficients of the most extractable nitroso compound of ruthenium had a second-power dependence on the $TOA \cdot HNO_3$ concentration in the extractant; with this compound, apparently, the complex $RuNO(NO_3)_3$ forms, with two molecules of $TOA \cdot HNO_3$ (Author)

Scholler, H.
CHEMISTRY IN THE SERVICE OF PRESERVATION OF NATIONAL RAW MATERIALS. I. WOOD SACCHARIFICATION. II. SACCHARIFICATION. [1963] [22]p. (1 fig. omitted) 35 refs.
Order from SLA $2.60 63-14248

Trans. of Chemiker Zeitung (Germany) 1939, v. 63, p. 737-740, 752-754.

DESCRIPTORS: *Cellulose chemistry, *Wood, Cellulose, *Saccharides, Production, *Proteins, *Ethanols, Biosynthesis, Yeasts, Fermentation.

Analytical Chemistry

APPLICATION OF TRANSIENT ELECTROCHEMICAL METHODS TO THE CHEMICAL ANALYSIS OF PRODUCTS CONCERNING NUCLEAR CHEMISTRY. Special rept. no. 1 (2nd part) on Contract 018-60-7-RDB. 1962, 34p.
Order from OTS or SLA $3.60 EURAEC-364

Trans. of a rept. from Brussels Free U. (Belgium) May 62.

DESCRIPTORS: *Electrochemistry, Chemical analysis, *Radiochemistry, *Oxidation-reduction reactions, Graphic analysis, *Polarization, Morphology, *Electric potential, *Electrodes, Quantitative analysis, *Inhibition.

A study was made on the behavior of depolarized electrodes from the standpoint of the influence of the prepolarization voltage on the morphology of transition curves. Two depolarizers were cited as examples. The inhibition phenonmenon is discussed.

Babko, A. K. and Vasilenko, V. T.
COMPARISON OF REAGENTS FOR THE COLORIMETRIC DETERMINATION OF ZIRCONIUM. II. OPTIMAL pH AND SPECIFICITY OF REAGENTS (Sravnenie Reaktivov dlya Kolorimetricheskogo Opredeleniya Tsirkoniya. II. Optimal'noe pH i Spetsifichnost' Reaktivov) tr. by J. Hardy. 28 Feb 63 [17]p. (foreign text included) 3 refs. CSIRO Trans. no. 6171.
Order from OTS or SLA $1.60 63-19144

Trans. of Ukrainskii Khimicheskii Zhurnal (USSR) 1961, v. 27, no. 3, p. 396-402.
A trans. in French is available from OTS or SLA $1.60 as 62-33729, CEA-tr-R1620, 28 Apr 62 [16]p.

DESCRIPTORS: *Zirconium, *Titanium, *Aluminum, *Colorimetry, *Complex compounds, *Reagents, Chemical indicators, Hydrogen ion concentration.

The optimal pH value and the specificity of the reaction were studied as criteria for evaluating reagents for zirconium. The colour of 16 reagents and their coloured complexes with zirconium, titanium and aluminium was investigated in relation to the pH of the solution. The criteria taken for comparing the reagents

for zirconium were the variation in the optical density ΔD with a change in the acidity within the limits $pH_{opt} \pm 0.5$, together with the permissible amounts of the elements per 1 μg zirconium. An examination was also made of the action of certain masking substances on the coloured compounds of zirconium, titanium and aluminium with the reagents here investigated. Xylenol orange and methylthymol blue were found to be the most suitable reagents for the determination of zirconium. (Author)

Carugno, N.
THE DETECTION AND DETERMINATION IN TOBACCO SMOKE OF SUBSTANCES DERIVED FROM THE DECOMPOSITION OF ZINC ETHYLENEBIS (DITHIOCARBAMATE). [1963] 8p. 10 refs.
Order from SLA $1.10 63-16572

Trans. of [il] Tabacco (Italy) 1961, v. 65, no. 699, p. 238-244.
Other translations are available from K-H $10.00 as K-H-11537-a [1962] 8p.; and on loan from SLA as 62-10396 [1961] 5p.

DESCRIPTORS: *Tobacco, *Smokes, *Hydrogen compounds, *Carbon compounds, *Sulfides, Detection, Determination, Zinc, Ethylenes, Carbamates, Thio radicals, Decomposition.

For abstract see Technical Translations 7: 196, 1962.

Carugno, N. and Giovannozzi-Sermanni, G.
DETERMINATION OF 3-4 BENZOPYRENE AND OTHER POLYCYCLIC AROMATIC HYDROCARBONS BY MEANS OF GAS CHROMATOGRAPHY. [1963] 9p. 25 refs.
Order from SLA $1.10 63-16573

Trans. of il Tabacco (Italy) 1959, v. 63, no. 692, p. 285-292.
Another trans. is available from K-H $11.25 as K-H-10281-b, Aug 60, 9p.

DESCRIPTORS: Chemical analysis, *Benzopyrenes, *Benzenes, *Gas chromatography, *Smokes, Tobacco.

A method was devised to identify and determine 3, 4-benzopyrene and other 17 polycyclic aromatic hydrocarbons by means of high-temperature gas-chromatography. As stationary phase Apiezon L. grease was used with columns of different length at 230°C. The method is simple, rapid and preferable in respect to other systems of analysis. (Author)

Carugno, N., Giovannozzi-Sermanni, G., and Wittmer, G.
GAS-CHROMATOGRAPHIC ANALYSIS OF TOBACCO OILS AND PRELIMINARY OBSERVATIONS ON THE CYTOLOGIC ACTIVITY OF SOME OF THEIR COMPONENTS. [1963] 12p. 14 refs.
Order from SLA $1.60 63-16574

Trans. of il Tabacco (Italy) 1961, v. 65, no. 699, p. 219-228.
Other translations are available from K-H $15.00 as K-H-11537-b [1962] 12p.; and on loan from SLA as 62-10395 [1961] 8p.

DESCRIPTORS: *Tobacco, *Seeds, *Oils, Gas chromatography, Histology.

For abstract see Technical Translations 7: 196, 1962.

Fyalkov, Ya. A. and Davidenko, N. K.
PHYSICOCHEMICAL ANALYSIS OF BINARY SALT SYSTEMS IN AQUEOUS SOLUTIONS. I. ELECTROCONDUCTIVITY OF SYSTEMS CONSISTING OF THE SULFATES OF POTASSIUM, SODIUM AND MAGNESIUM. [1963] 14p. (figs. omitted) 32 refs.
Order from OTS or SLA $1.60 63-16158

Trans. of Ukrain[skii] Khim[icheskii] Zhur[nal] (USSR) 1954, v. 20, p. 343-349.

DESCRIPTORS: Salts, *Potassium compounds, *Sodium compounds, *Magnesium compounds, *Sulfates, Solutions, Electrical conductance, *Electrochemistry, Chemical analysis.

Surveyed were the literature data and the theoretical bases of the problem of the application of the measurements of the electroconductivity as a method of physicochemical analysis of salt systems in aqueous solutions. Measured were the specific electroconductivities of the systems Na_2SO_4-K_2SO_4-H_2O, $MgSO_4$-H_2O and $MgSO_4$-Na_2SO_4-H_2O like this that the total concentrations were kept constant for each system, and that just the ratios of the components were changed. The deviations of the measured electroconductivities from the found ones for the systems Na_2SO_4-K_2SO_4-H_2O and $MgSO_4$-Na_2SO_4-H_2O under the conditions employed do not surpass the limits of experimental error. The deviation of the found electroconductivity from the calculated one in the system MgO_4-K_2SO_4-H_2O was a maximum at the equimolecular ratio of the components in the mixture. This talks in favor of the fact that in the solution a binary salt is formed of the composition $MgSO_4 \cdot K_2SO_4$. (Author)

Gallai, Z. A. and Sheina, N. M.
TITRAGE AMÉROMÉTRIQUE DU VANADIUM ET DE L'URANIUM AVEC LES SELS DU TITANE TRIVALENT (Amperometricheskoe Titrovanie Vanadiya i Urana Solyami Trekhvalentnogo Titana) [Amperometric Titration of Vanadium and Uranium with Trivalent Titanium Salts] tr. by Garber. 28 Apr 62 [12]p. (foreign text included) 7 refs. CEA Trans. no. R 1619.
Order from OTS or SLA $1.60 63-15481

Trans. in French of #Zh[urnal] Anal[iticheskoi] Khim[ii] (USSR) 1961, v. 16, no. 6, p. 706-708.

DESCRIPTORS: *Titration, *Vanadium, *Uranium, *Titanium compounds, Salts, Chromium, Manganese, Chemical analysis, Electric currents.

An amperometric method has been developed for the titration of vanadium (IV) with titanium (III) in pure salts and in the presence of chromium, manganese and titanium. Conditions have been found for the amperometric determination of uranium with the use of titanium (III) in the presence of titanium (IV) up to the ratio, U : Ti = 1:100. (Author)

Gimesi, O., Rady, Gy., and Erdey, L.
COMPLEXOMETRIC DETERMINATION OF ELEMENTARY SULPHUR AND ELEMENTARY SELENIUM. [1963] 5p. 3 refs.
Order from SLA $1.10 63-14446

Trans. of Acta Chimica (Hungary) 1962, v. 33, p. 381-385.

DESCRIPTORS: *Complex compounds, *Sulfur, *Selenium, Cyanides, Thiocyanates, Cyanates, Chemical analysis.

A complexometric method was developed for indirect determination of elementary sulphur and elementary selenium. The principle of the method is as follows: Elementary sulphur or selenium is allowed to react with a known excess of potassium cyanide to convert the elements into thiocyanate and selenocyanate. Then on adding nickel solution to the system, excess cyanide ions are determined in the usual way by complexometry. (Author)

Gräbner, H.-J.
POTENTIOMETRIC METHOD FOR THE DETERMINATION OF SMALL BORON CONTENTS IN STEELS. June 63.
Order from BISI £3 10s BISI-3281

Trans. of Zeitschrift für Analytische Chemie (West Germany) 1962, v. 184, no. 5, p. 327-341.

DESCRIPTORS: *Steel, *Boron, Chemical analysis, *Potentiometers.

Grob, Kurt.
GAS CHROMATOGRAPHY OF CIGARETTE SMOKE. PT. I. A METHOD FOR THE ROUTINE ANALYSIS OF THE GAS-VAPOR PHASE. [1963] 10p. (1 fig. omitted). 7 refs.
Order from SLA $1.10 63-14394

Trans. of Beiträge zur Tabakforschung [sic] 1962, no. 7, p. 285-290.

DESCRIPTORS: *Gas chromatography, *Cigarettes, *Smokes, *Tobacco, Chemical analysis, Quality control.

A much simplified method for the gas chromatography of the vapour-gas phase of tobacco smoke is described. It employs thermal conductivity detectors and involves an accumulation stage for the smoke condensate. The significant simplification consists in the condensation in dry ice in a cold trap expecially developed for the purpose. A test chromatogram with a statement of the most important components is appended. (Author)

Kiss, Sandor A.
TITRATION OF SULFIDE, POLYSULFIDE AND THIOSULFATE WITH "DEAD STOP" INDICATION (Titration von Sulfid, Polyusulfid und Thiosulfat mit "Dead Stop-Indikation). [1963] (foreign text included) 8 refs.
Order from SLA $1.10 63-14082

Trans. of Z[eitschrift für] Anal[ytische] Chem[ie] (West Germany) 1962, v. 188, p. 341-344.

DESCRIPTORS: *Sulfides, Polymers *Thiosulfates, Volumetric analysis, Reagents Ammonia, Silver compounds, Nitrates, Mercury compounds, Chlorides, Boric acid.

A method has been developed for the volumetric determination of sulphide, polysulphide, and thiosulphate using dead stop end point indication. Sulphide is titrated by ammoniacal silver nitrate solution, thiosulphate is titrated by mercuric chloride solution after sulphide has been removed by boric acid, and polysulphide is transformed to thiosulphate by help of sulphite, thiosulphate then again being titrated by mercuric chloride solution. (Author)

Kleiner, K. E. and Markova, L. V.
DOSAGE DE L'OXYGENE DANS LES METAUX ET LES OXYDES A L'AIDE DU MONOCHLORURE DE SOUFRE. II. DOSAGE DE L'OXYGENE DANS LES OXYDES DU Zr, B ET REACTION DU S_2Cl_2 AVEC DIFFERENTES SUBSTANCES [Determination of Oxygen in Metals and Oxides by Means of Sulfur Monochloride. Pt. 2. Determination of oxygen in Zirconium Oxides and Boron Oxides and the Interaction of Sulfur Monochloride with Various Substances] tr. by Vino. 30 Nov 62 [7]p. 4 refs. CEA Trans. no. R 1676.
Order from OTS or SLA $1.10 63-15504

Trans. in French of Ukrain[skii] Khim[icheskii] Zh[urnal] (USSR) 1957, v. 23, no. 2, p. 236-238.

DESCRIPTORS: *Metals, *Zirconium compounds, *Boron compounds, Oxides, Chemical analysis, *Oxygen, Determination, Reagents, *Sulfur compounds, Chlorides, Chemical reactions, Aluminum, Silicon compounds, Dioxides, Copper, Iron compounds, Silicides, Nickel alloys, Chromium alloys, Iron alloys, Zirconium alloys, Reaction kinetics.

(See a so 63-15501)

Lardera, M. R., Cernia, E., and Mori, A.
DETERMINATION OF VINYL ACETATE IN MIXED POLYMERS OF VINYL CHLORIDE AND VINYL ACETATE. [1963] 4p. 2 refs.
Order from SLA $1.10 63-14706

Trans. of Annali [di] Chimica (Italy) 1956, v. 46, p. 194-198.

DESCRIPTORS: *Polyvinyl chloride, *Vinyl radicals, *Acetates, Mixtures, Chemical analysis, Reagents, Ethylenes, Dioxides, Sodium compounds, Ethanols, Hydrates, Silver compounds, Sulfates, Sulfuric acid.

The authors discuss a generalized method of saponification to determine the percentage of vinyl chloride in mixed polymers of vinyl chloride and vinyl acetate. All the methods heretofore used and which lead to reproducible results for mixed polymers produced by solution or emulsion, are badly suited to determinations of polymers obtained by the suspension type of polymerization. These authors propose a method using along with saponifying agents, solvents which are strongly polar. By the data given is shown the possibility, by judicious application, of obtaining reproducible results for any type of mixed polymer of vinyl chloride with vinyl acetate. (Author)

Murata, Yoko and Takenishi, Tadao.
DIRECT GAS CHROMATOGRAPHIC ANALYSIS OF ORGANIC COMPOUNDS IN AQUEOUS SOLUTION. [1963] [17]p. (foreign text included) 5 refs.
Order from SLA $1.60 63-18024

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 5, p. 787-791.

DESCRIPTORS: *Organic compounds, *Gas chromatography, *Butanol, *Methanols, *Propanols, *Acrylonitriles, *Propionitriles, *Aldehydes, *Amino acids, Chromatographic analysis, Solvents, Water.

Ploetz, Theodor and Bartels, Hilde.
THE QUANTITATIVE DETERMINATION OF LEVULINIC ACID. [1963] 14p, 5 refs,
Order from SLA $1.60 63-14222

Trans. of [Chemische] Berichte (Germany) 1941, v. 74, p. 1456-1459.

DESCRIPTORS: Carbohydrates, *Hexoses, Decomposition, *Valeric acids, Quantitative analysis, Reagents, Iodine, Thiosulfates.

Possidoni de Albinati, Julia F. and Rodriguez Pazques, R. H.
THE SPECTROPHOTOMETRIC DETERMINATION OF MICROQUANTITIES OF BORON. [1963] 6p. 7 refs.
Order from SLA $1.10 63-16378

Trans. of Asoc[iacion] Quimica Argentina. Anales, 1955, v. 43, p. 215-225.
Another trans. is available from SLA as 58-742.

DESCRIPTORS: *Boron, *Curcumin, Chemical indicators, Boric acids, Chemical analysis, Microanalysis, Spectroscopy, Spectrophotometers.

Pyriki, Constantin and Müller, Rudolf.
CONFRONTATION OF METHODS FOR OBJECTIVE QUALITY DETERMINATION OF CIGARETTE TOBACCOS. [1963] 7p.
Order from SLA $1.10 63-14369

Trans. of unidentified article, n.p., n.d.

DESCRIPTORS: *Quality control, Determination, Cigarettes, *Tobacco, Chemical analysis.

Schroeder, Robert.
COLORIMETRIC DETERMINATION OF PHOSPHORUS IN STEEL. [1963] 2p. 1 ref.
Order from SLA $1.10 63-14600

Trans. of Stahl und Eisen (Germany) 1918, v. 38, 11 Apr, p. 316-317

DESCRIPTORS: *Steel, *Phosphorus, Colorimetric analysis.

Sedivec, Vaclav.
COLOR REACTION OF 1-CHLORO-2.4-DINITROBENZENE WITH PYRIDINE - PHOTO. STUDY. [1963] 5p. (figs. omitted) 12 refs.
Order from SLA $1.10 63-14244

Trans. of Chemicke Listy (Czechoslovakia) 1956, v. 50, p. 748-751.

DESCRIPTORS: *Nitrobenzenes, Chlorides, *Colorimetric analysis, Reagents, *Pyridines, Sodium compounds, Hydroxides, Heating.

Optimum conditions for color reaction of 1-chloro-2.4-dinitrobenzene with pyridine are determined and a study made of the possibilities of photometric determination of same in the presence of other aromatic nitro-compounds. (Author)

Wahl, Rudolf.
TOBACCO CHEMISTRY METHODS OF DETERMINING NICOTINE (A COMPARISON OF THE FORCHEIM PICRATE METHOD WITH THE NEWLY-DEVELOPED FORCHEIM CYANOGEN BROMIDE METHOD). [1962] 12p.
Order from K-H $15.00 K-H 3517 a

Trans. from Tabak-Forschung (West Germany) 1949-53, nos. 1-10, n.p.

DESCRIPTORS: *Nicotine, *Tobacco, Chemical analysis, *Ammonium picrate, *Cyanogen, *Bromides.

Inorganic Chemistry

SURVEY OF THE MOST IMPORTANT INORGANIC PHOSPHORUS COMPOUNDS. [1963] 17p.
Order from OTS or SLA $1.60 63-16093

Trans. from mono. (report) of I. G. Farbenindustrie A.G. [Schkopau] n.d. (PB-91098).

DESCRIPTORS: *Phosphorus compounds, Inorganic substances, Phosphides, Phosphorus acids, Phosphates, Phosphoric acids, Polymers, Amines, Imines, Chemical properties.

Brasseur, Paul.
PREPARATION AND STRUCTURE OF ANHYDROUS FERRIC METAPHOSPHATE. [1963] 12p. 6 refs.
Order from SLA $1.60 63-14746

Trans. of Société Chimique de France. Bull[etin] 1944 [ser. 5] v. 11, p. 2-6.

DESCRIPTORS: *Iron compounds, Oxides, *Phosphates Anhydrides, Synthesis (Chemistry), Dehydration, Calcination, Phosphoric acid, *Crystal structure, X-ray diffraction analysis.

Anhydrous ferric metaphosphate $3P_2O_5$, Fe_2O_3 can be prepared either by having the ferric oxide dissolved in phosphoric acid or in metaphosphoric acid through dehydration of a hydrated ferric metaphosphate, or

also by a direct combining of Fe_2O_3 with P_2O_5. The anhydrous ferric metaphosphate will always exhibit the same structure under the X-ray regardless of the manner in which it is prepared; the crystals which form are monoclinic or microscopic. At between 200° and 250° the effect of the phosphoric acid on the ferric oxide gives a hydrated phosphate $2P_2O_5$, Fe_2O_3, $3H_2O$; the latter dehydrates, giving a phosphate $2P_2O_5$, Fe_2O_3 characterized by its X-ray diagram. (Author)

Dieffenbach, O.
PROCESS FOR THE PRODUCTION OF ALKALI METAL MANGANATES. [1963] 5p.
Order from OTS or SLA $1.10 63-14523

Trans. of German patent 195,523, cl. 12n, gr. 3, effective date 27 Aug 04, issued 19 Feb 08.

DESCRIPTORS: *Alkali metal compounds, *Manganates, Permanganates, Manganese compounds, Dioxides, Decomposition, Production.

Hirakawa, Zenzo.
A PROCESS OF MANUFACTURING LIQUID NITROGEN PEROXIDE (N_2O_4). July 63, 6p. 2 refs.
Order from SA $16.00 SA Code-P-157

Trans. of Japanese patent 100,964, cl. 144, gr. 2: Nitric acid and its salts, additional pat. to 93,949, filed 3 Aug 32, pub. 6 Feb 33 as 552/1933, patented 6 May 33, by Dainippon-Jinzo-Hiryo Co.

DESCRIPTORS: *Nitrogen compounds, *Peroxides, Manufacturing methods, Absorption, Oxidation, Ammonia, Separation, *Nitric acid, Production.

Illarionov, V. V., Gerburt, E. V. and others.
METHOD OF PREPARATION OF A VANADIUM CATALYST FOR THE OXIDATION OF SULFUR DIOXIDE. [21 Mar 63] 2p.
Order from OTS or SLA $1.10 63-16411

Trans. of U. S. S. R. patent 107,200, 1957.

DESCRIPTORS: *Sulfur compounds, Dioxides, Oxidation, *Catalysts, *Vanadium catalysts, Preparation, Powder alloys, Vanadium compounds, Potassium compounds, Oxides, Sulfates, Gypsum.

A method of preparation of a vanadium catalyst for the oxidation of SO_2, based on a support and on compounds of vanadium and potassium sulfate is presented. The support is mixed with a powdered alloy of vanadium pentoxide with potassium sulfate, pyrosulfate, or bisulfate in the ratio $V_2O_5:K_2O < 1$, followed by shaping and roasting of the mixture obtained at temperatures above 350°. To increase the activity of the catalyst, 5 to 20% of sulfur is introduced into the mixture. To increase the mechanical strength of the catalyst, gypsum is introduced into the mixture, in an amount of 5 to 20% of the weight of the support.

Jaubert, G. F.
METHOD FOR THE PREPARATION OF COMPRESSED SODIUM PEROXIDE ALONE OR COMBINED WITH OTHER SALTS. [1963] 3p.
Order from OTS or SLA $1.10 63-14825

Trans. of Austrian patent 5,196, n.d.

DESCRIPTORS: *Sodium compounds, *Peroxides, Pressure, Hardness, Density, Powders, Bleaching agents.

Landmann, Kurt.
PROCESS FOR THE PRODUCTION OF EPSOM SALT NEEDLE CRYSTALS. [1963] [5]p.
Order from OTS or SLA $1.10 63-14527

Trans. of German patent 710,048, pub. 2 Sep 41, cl. 12m, gr. 3, by Wintershall A.G., pat. from 7 Aug 37, granted 24 July 41.

DESCRIPTORS: *Magnesium compounds, *Sulfates, *Crystals, Separation, Solutions, Cooling.

Müller, Richard.
PRODUCTION OF PHOSPHORUS TRICHLORIDE FROM FERROPHOSPHORUS. [1963] 3p.
Order from OTS or SLA $1.10 63-14526

Trans. of German patent 622,648, issued 3 Dec 35, cl. 12 i, gr. 31, C 49,432 IVb/12 i, granted 14 Nov 35, by Chemische Fabrik von Heyden, A.G., pat. from 17 July 34.

DESCRIPTORS: *Phosphorus compounds, *Chlorides, *Iron compounds, Chlorination, Reduction (Chemistry).

Muthmann, W., Weiss, L., and Metzger, Josef.
EXPERIMENTS TO PREPARE METALS OF THE RARE EARTHS AND EARTH ACIDS AND THE APPLICATIONS THEREON. IV. ABOUT CALCIUM METAL. [1963] 2p.
Order from SLA $1.10 63-16175

Condensed trans. of excerpts from [Justus Liebigs] Annalen der Chemie (Germany) [1905] v. 355, p. 137-143.

DESCRIPTORS: *Calcium, Alkaline earth metals, Reduction (Chemistry), *Potassium, *Sodium, Metals, Aluminum, Chlorides.

Roesler, Horst and Mattes, Ludwig.
PROCEDURE FOR PREPARATION OF NON-HYGROSCOPIC, FREE FLOWING, CONDENSED GLASSY PHOSPHATES. [1963] 6p. 1 ref.
Order from OTS or SLA $1.10 63-14940

Trans. of German patent 1,097,963, G 26732 IVa/12i, cl. 12i 31, internat'l cl. COlb, appl. 28 Mar 59, pub. of appl. and issuance of the specifications 26 Jan 61, by Guilini Brothers, Stock Co.

DESCRIPTORS: *Phosphates, *Sodium compounds, *Binders, Powders, Carbonates.

The invention involves a procedure, for preparation of non-hygroscopic, free flowing, condensed glassy phssphates, which correspond to the general formula $Na_{n+2}F_nO_{3+1}$ whereby n is larger than 3 , with liquid and solid granulation auxiliary agents, characterized in as much that the powdery condensed phosphates are granulated on a granulation plate with a liquid granulation agent, and subsequently, a solid granulation auxiliary agent is added which binds the liquid granulation auxiliary agent. Water and/or a liquid washing active substance and/or their acqueous solutions are employed as liquid granulation agent. Phosphate is utilized or sodium carbonate is fully or partly utilized as a solid granulation auxiliary agent. The solid granulation auxiliary agents are partly added to the liquid granulation auxiliary agents. (Author)

Shevchenko, V. B., Povitskii, N. S. and others.
EXTRACTION DE L'ACIDE NITRIQUE DANS LE TRIBUTYLPHOSPHATE (Ekstraktsiya Azotnoi Kisloty v Tributilfosfat) [The Extraction of Nitric Acid With Tributyl Phosphate] tr. by Anonyme. 26 Mar 62 [14]p. (foreign text included) 9 refs. CEA Trans. no. R 1521.
Order from OTS or SLA $1.60 63-15473

Trans. in French of Zh[urnal] Neorg[anicheskoi] Khim[ii] (USSR) 1958, v. 3, no. 9, p. 2109-2112.

DESCRIPTORS: *Nitric acid, *Butyl radicals, *Phosphates, Phase studies, Solvents, Toluenes, Benzenes, Kerosine, Complex compounds.

The influence of the nature of the solvents on the distribution of nitric acid between water and tributyl phosphate was investigated in the case of an ionic strength of the solution of 1, 0, 5 and 3. The maximum value of K_p in nitric acid solution with the ionic strength of 3 is obtained if toluene is used as solvent for tributyl phosphate. The change of K_p by the nature of the solvent in the case of an ionic strength of 3 is to be divided as follows: toluene, benzene, kerosene, CCl_2F-CCl_2F, CCl_4. The following variation of the above sequence takes place if the ionic strength is reduced to 1: kerosene, toluene, benzene, CCl_2F--CCl_2F, CCl_4. Comparative investigations of the extractions in $HClO_4$ and HNO_3 solutions showed that the complex $HClO_4$. TBPh is to a greater extent polar than the complex HNO_3. TBPh.

Weise, Paul and Raspe, Friedrich.
PRODUCTION OF PURE TITANIUM NUCLEI FOR THE HYDROLYTIC PRECIPITATION OF TITANIC ACID. [1963] 7p.
Order from OTS or SLA $1.10 63-14528

Trans. of German patent 718,510, cl. 12 i, gr. 39, T 44486 IV b/12 i, by Titanium Society Ltd., pub. 13 Mar 42, pat. from 4 Oct 34, granted 19 Feb 42.

DESCRIPTORS: *Titanium, *Nuclei, *Titanium compounds, *Titanic acid, Hydrolysis, Chemical precipitation, Sulfates.

Zagvozdkin, K. I., Rabinovich, Yu. M., and Barilko, N. A.
A STUDY OF THE EQUILIBRIUM OF THE SYSTEM P_2O_5-H_2O. [1963] 24p. 17 refs.
Order from OTS or SLA $2.60 63-14609

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1940, v. 13 [no. 1] p. 29-36.
Another trans. is available from OTS or ETC $1.85 as 61-17854, MTWL-168, 17p.

DESCRIPTORS: *Phosphoric acids, Dissociation, Dehydration, Phosphorus compounds, Oxides, Water, *Chemical equilibrium.

An original apparatus was devised for measuring the dissociation pressure of H_3PO_4 within the temperature range from 150-300°. This apparatus may be successfully used in studying the equilibria of other systems, for example in studying crystal hydrates. A method was developed for determining small amounts of $H_4P_2O_7$ in presence of large amounts of HPO_3. The P_2O_5-H_2O equilibrium was studied by measuring the dehydration pressure of H_3PO_4 in the temperature range from 150-300° and by analyzing the composition of the condensed phase corresponding to the given pressure.

Organic Chemistry

DRESDEN SYMPOSIUM ON ORGANIC AND NON-SILICATE SILICON CHEMISTRY (NO. 2) 26-30 MAR 63. 2 July 63, 40p. JPRS: 19997.
Order from OTS $1.25 63-31187

Trans. of Chemische Gesellschaft in der Deutschen Demokratischen Republik. [Mitteilungsblatt] (East Germany) 1963, v. 10, no. 3, p. 41-60.

DESCRIPTORS: *Silicon compounds, Electric discharges, *Silanes, *Halogens, Methyl radicals, Phenyl radicals, Silicones, Amines, *Elastomers, Rubber, Chemical reactions, Condensation reactions, Molecular structure, Phosphorus compounds, Alkoxy radicals, Hydrides, Amino acids, Peptides, Vinyl radicals, Gels, Metallic compounds, Ion exchange, Complex compounds, Organic compounds, Conferences.

Consists of articles by D. N. Andreev, V. Bazant, K. Becker-Palossy, T. Biernacka, S. N. Borissov, H. Bürger, J. Cermak, B. Csakvari, V. Chvalovsky, G. Damaschun, G. Ertel, W. Förster, R. Ch. Freidlina, G. Fritz, G. Garzo, I. Gebhardt, P. Geimaer, J. Goubeau, H. Grosse-Ruiken, E. Hengge, S. Herzog, H. Jenkner, Z. Kocon, H. Kriegsmann, A. Kuszmann, Z. Lasocki, S. Lasztity, K. Licht, V. R. Mironov, R. Müller, J. Nagy, N. S. Nametkin, O. M. Nefedov, V. A. Ponomarenko, E. G. Rochov, W. Rodziewicz, P. Rosciszewski, H. Rotzsche, K. Rühlmann, I. Ruidisch, F. Runge, S. I. Sadych-Sade, H. Schmidbaur, M. Schönherr, G. Schott, H. Schumann, D. Snobl, T. Szekely, T. I. Tschernyscheva, U. Wannagat, V. M. Vdovin, M. Wieber, W. Wilborn, E. Wolf, F. Wolf, M. G. Vornokov.

[INVESTIGATION TO FIND COMMERCIALLY ATTRACTIVE, HIGH-YIELD PROCESSES FOR THE PREPARATION OF TRIPHENYLLEAD HYDROXIDE, TRIPHENYLTIN HYDROXIDE, AND TRICYCLOHEXYLLEAD HYDROXIDE]. 23 May 47, 2p.
Order from SLA $1.10 63-14310

Trans. of paper presented at the Convention of Chemical Professors, Heidelberg, 18 Apr 47.

DESCRIPTORS: *Metalorganic compounds, *Phenyl radicals, *Lead compounds, *Tin compounds, Hydroxides, *Cyclohexane derivatives, Synthesis (Chemistry), Production.

PREPARATION OF SODIUM METHYLATE. 14 Jan 49, 5p. 1 ref.
Order from OTS or SLA $1.10 63-10952

Summary trans. from unidentified German mono. pub. by Deutsche Gold- und Silberscheideanstalt, Constance n.d. (PB-73679).

DESCRIPTORS: *Metalorganic compounds, *Sodium compounds, *Methanols, Salts, Synthesis (Salts), Sodium, Hydroxides, Oxides, Chemical equilibrium, Costs.

In order to obtain a basis for comparison between various methods of preparation of sodium methylate, this compound was prepared from methanol and sodium oxide or caustic soda. The methylate content of the various reaction products was determined. An attempt was made by means of the reaction of caustic soda with methanol to determine the approximate position of the equilibrium between caustic soda, methanol, sodium methylate and water. Raw material costs were determined for the various methylate solutions prepared. (Author)

PROCESS FOR PREPARATION OF POLYMERS CONTAINING HYDROXAMIC ACID GROUPS [1963] 6p. 6 refs.
Order from OTS or SLA $1.10 63-14348

Trans. of Belg[ian] pat[ent] 560,782, appl. 13 Sep 57, granted 13 Mar 58, printed and issued 22 Apr 60, by Gevaert Photo-Products.

DESCRIPTORS: *Polymers, *Hydroxamic acids, *Amides, *Oximes, Hydrolysis, Amines, Hydroxides, Preparation.

The invention concerns a process for the preparation of polymers containing hydroxamic acid groups, distinguished by the fact that amidoxime groups in polymers are converted to hydroxamic acid groups. Process for preparation of novel polymers, distinguished by the fact that Polymers containing amidoxine groups are subjected to mild hydrolysis which is carried out in the presence of a hydroxylamine salt. The resultant polymers are treated with diamines. (Author)

PROCESS FOR THE PREPARATION OF N-PHENYL-N'-CYCLO-HEXYLPARAPHENYLENEDIAMINE [Verfahren zur Darstellung von N-Phenyl-N'-Cyclo-hexyl-p-phenylendiamine]. 17 Sep 48 [2]p. 2 refs.
Order from OTS or SLA $1.10 63-14809

Trans. of German patent application I 77,296, IVc/12c, Apr 44, by I. G. Farbenindustrie, A.G. (PB-33755).

DESCRIPTORS: *Hydrazine derivatives, Hexyl radicals, Benzenes, Synthesis (Chemistry), Production, Nitro radicals, Phenyl radicals, *Amines, *Cyclohexanols, Nickel catalysis.

The invention involves a process for the preparation of N-phenyl-N'-cyclohexyl-paraphenylyenediamine, characterized by the fact that one heats 4-nitrodiphenylamine in the presence of cyclohexanol, with a nickel catalyst and hydrogen, initially under high pressure to a temperature below 100°, and then at atmospheric pressure in the absence of hydrogen, with further addition of nickel catalyst if necessary, at the boiling point, after which the water produced in the reaction is carefully removed with the use of a column, and after the theoretical amount of water has been removed, the reaction is interrupted. (Author)

PROCESS FOR THE PRODUCTION OF PHOSPHORIC ACID. [1963] 5p.
Order from OTS or SLA $1.10 63-14541

Trans. of Swiss patent 266,379, cl, 42, appl. presented 8 Apr 48, registered 31 Jan 50, pub. 17 Apr 50, by Krebs & Co.

DESCRIPTORS: Industrial production, *Phosphoric acid.

The invention concerns a process for the production of phosphoric acid, characterized by the fact that a water-insoluble calcium phosphate in presence of water is treated with Cl_2 and SO_2 in order to obtain an aqueous phosphoric acid. (Author)

Brodskii, A. I. and Vysotskaya, N. A.
A STUDY USING 018, OF THE MECHANISM OF HYDROXYLATION OF PHENOL AND OXIDATION OF ANTHRACENE BY PEROXIDES. [1963] 7p.
Order from ATS $8.50 ATS-07Q70R

Trans. of #Zh[urnal] Obshch[ei] Khim[ii] (USSR) 1962, v. 32, no. 7, p. 2273-2278.

DESCRIPTORS: *Oxygen, Isotopes, Chemical reactions, *Phenols, Oxidation, *Anthracene, *Peroxides.

Casanova, Jean.
METHOD FOR THE PREPARATION OF PERACETIC ACID. [1963] 7p.
Order from OTS or SLA $1.10 63-16430

Trans. of French patent 1,298,157, 28 May 62, by Wacker-Chemie G. m. b. H.

DESCRIPTORS: *Acetic acids, Synthesis (Chemistry), *Acetaldehydes, Oxidation, Oxygen, Catalysts, *Cobalt catalysts, Chlorides, Acetates.

The invention concerns a method for the preparation of peracetic acid from acetaldehyde and oxygen. (Author)

Devyatykh, G. G., Zorin, A. D. and others.
SEPARATION OF BUTADIENE FROM THE BUTANE-BUTYLENE (B-B) FRACTION BY THE METHOD OF EXTRACTIVE FRACTIONATION. [1963] [8]p. 6 refs.
Order from OTS or SLA $1.10 63-18417

Trans. of #Zhur[nal] Priklad[noi] Khim[ii] (USSR) 1962, v. 35 [no. 7] p. 1597-1601.

DESCRIPTORS: Kerosene, Pyrolysis, *Butanes, *Butenes, Fractionation, *Butadienes, *Solvent extraction, Solvents, Glycols, *Towers (Chemistry).

Studying a series of new solvents for butadiene separation from the C_4 fraction by the method of extractive fractionation it was established that ethylcellosolve with 20 wt. % water added is the best. In contrast to the aqueous furfural actually applied, this solvent does not polymerize in the vat of column, has a smaller boiling temperature, while the butadiene is more soluble in it. It was shown during the investigation on butadiene separation from C_4 fraction at emulsification, that the emulsification course is more efficient, than the usual course. (Author)

Dobryanskii, A. F. and Khomutin, M. S.
PRODUCTION OF DICHLOROETHANE FROM CHLORINE AND ETHYLENE (IN SEMI-COMMERCIAL PLANT) [Poluchenie Dikhloroetana iz Khlora i Etilena na Poluzavodskoi Ustanovke]. [1963] [19]p. 7 refs.
Order from OTS or SLA $1.60 63-14123

Trans. of [Gosudarstvennyi Institut Prikladnoi Khimii. Trudy] (USSR) 1935, v. 24, p. 32-47.
Another trans. is available from SLA as RT-1632, 23p.

DESCRIPTORS: *Chlorine, *Ethylenes, Physical properties, Chemical properties, Synthesis (Chemistry), Gas analysis, Production.

Frank, Charles Edouard and Foster, Walter Edward.
DIMERIZATION OF DIOLEFINES AND OBTAINED PRODUCTS. [1956] 2p.
Order from OTS or SLA $1.10 62-16400

Trans. of French patent 1,093,096, gr. 14 cl. 1, by National Distillers Products Corp. (U. S.) appl. 25 Jan 54, issued 17 Nov 54, pub. 29 Apr 55 (appl. U. S., 26 Jan and 25 Sep 53 in names of applicants).

DESCRIPTORS: *Dienes, Butadienes, Chemical reactions, Organic acids.

Gulyaev, G. V., Kozlov, G. I. and others.
THE CONVERSION OF METHANE TO ACETYLENE IN A PLASMA JET. [1963] 3p.
Order from ATS $5.00 ATS-21Q70R

Trans. of Neftekhimiya (USSR) 1962, v. 2, no. 5, p. 793-794.

DESCRIPTORS: *Methanes, *Acetylenes, Plasma jets,

Günther and Schnell.
GLUTAMIC ACID. [1963] [12]p. 22 refs.
Order from OTS or SLA $1.60 63-14543

Trans. of mono. rept. Glutaminsäure, n.p., 30 Jan 31, 5p. (PB-27885).

DESCRIPTORS: *Glutamic acid, Proteins, Synthesis, Chemical reactions.

Husson, P.
STUDY OF SOME DERIVATIVES FROM THE OXIDATION OF METHYLENE SULFIDE. Review of Doctoral Thesis, Paris U. (France) 1929. [1963] 1p.
Order from SLA $1.10 63-14705

Trans. of Journal de Pharmacie et de Chimie (France) 1930, ser. 8, v. 11, p. 46-47.

DISCRIPTORS: *Methanes, *Formaldehyde, Sulfides, Oxidation, Potassium Compounds, Permanganates, *Sulfonates, Synthesis (Chemistry)

Kamio, K., Kojima, S., and Daimon, H.
POLYMERIZATION OF ALDEHYDES. [1963] 7p.
Order from ATS $9.25 ATS-95Q69J

Trans. of Kogyo Kagaku Zasshi (Japan) 1963, v. 66, no. 2, p. 246-249.

DESCRIPTORS: *Aldehydes, *Polymerization.

Kasatkin, A. G., Kagan, S. Z., and Trukhanov, V. G.
INVESTIGATION OF THE STATICS OF THE EXTRACTION OF CAPROLACTAM WITH ORGANIC SOLVENTS. [1963] 12p.
Order from ATS $12.75 ATS-55Q69R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 3, p. 190-196.

DESCRIPTORS: *Organic solvents, *Solvent extraction, Statics, *Lactams.

Kato, Jiro, Iwanaga, Yoshiharu and others.
METHOD OF CONTINUOUSLY SYNTHESIZING ALDEHYDE BY THE OXO-REACTION. July 63, 14p. (figs. omitted).
Order from SA $22.00 SA Code-P-141

Trans. of published Japanese patent 12255/1962, cl. 16-B-51 (16-B-013) (16-B-68) appl. no. 283/1959 filed 31 Dec 58, pub. 28 Aug 62, by Ajinomoto Co., Ltd.

DESCRIPTORS: *Aldehydes, Synthesis (Chemistry), *Oxo process, *Cobalt catalysts, Carbonyl radicals, Carbon compounds, Monoxides, Hydrogen, Alkenes.

Kawano, Kentaro and Odo, Keijiro.
SYNTHESIS OF GUANYL-o-ALKYLISOUREA SALTS AND THEIR REACTIONS. Rept. no. 1 on Guanyl-o-alkylisoureas. [1962] 15p. 7 refs.
Order from SLA $1.60 62-18037

Trans. of Nihon Kagaku Zasshi (Japan) 1961, v. 82, no. 12, p. 1672-1675.

DESCRIPTORS: Synthesis (Chemistry), *Guanidines, *Urethanes, *Alkyl radicals, *Chlorides, Cyanamides, Urea, Hydrochloric acid, Alcohols, Addition reactions.

Guanyl-o-alkylisourea hydrochlorides (R, CH_3 and C_2H_5) were newly synthesized by addition reaction of dicyandiamide and alcohol in the presence of dry hydrochloric acid at room temperature. When conducted at a relatively high temperature in the presence of a concentrated acid, this reaction proceeded further and guanylurea hydrochloride and [the corresponding] alkyl chloride formed. Guanyl-o-alkylisoureas were stable when in neutral state but they hydrolyzed readily in acidic aqueous solutions and yielded [the corresponding] guanylurethans. It was also discovered that they formed biguanide quantitatively by reaction with ammonia. This reaction was believed to be a convenient route in the syntheses of biguanide derivatives from amines. (Author)

Krause, Erich and Polack, Herbert.
PURIFICATION OF TRIPHENYL BORYL SODIUM AND OTHER ALKALI METAL COMPOUNDS OF TRIPHENYLBORINE. [1963] [12]p. (figs. omitted) 4 refs.
Order from SLA $1.60 63-16027

Trans. of [Chemische Berichte] (Germany) 1926, v. 59, p. 777-783.

DESCRIPTORS: *Borines, Phenyl radicals, Alkali metal compounds, *Sodium compounds, Synthesis (Chemistry), Purification.

Krzikalla, H. and Woldan, E.
THE ADDITION OF CARBON MONOXIDE TO AMINES. [1963] 3p.
Order From OTS or SLA $1.10 63-14840

Trans. of unidentified German language mono., n.p., 1941, 3p. (PB-603).

DESCRIPTORS: *Amines, *Carbon compounds, *Monoxides, Addition reactions, *Formamides, Formyl radicals, Piperidines, Carbazoles, Urea derivatives, Aniline derivatives, Synthesis (Chemistry).

A report was made on the addition compounds of carbon monoxide and aliphatic or aromatic amines in the presence of a catalyst and under pressure. Primary and secondary amines yield substituted formamides; tertiary amines react by formation of disubstituted formamides either by splitting of an alkyl or by the insertion of CO between nitrogen and an ethyl group. (Author)

Kurilenko, O. D., Kaban, A. P., and Nedyuzhin, A. A.
A STUDY OF THE RHEOLOGICAL PROPERTIES OF GLUTINOUS STARCH, AMYLOSE AND AMYLOPECTIN SOLUTIONS. [1963] 8p. 9 refs.
Order from OTS or SLA $1.10 63-14965

Trans. of [Izvestiya Vysshikh Uchebnykh Zavedenii. Pishchevaya Tekhnologiya] (USSR) 1961, no. 1 [p. 12-16].
Another trans. is available from K-H $10.00 as K-H-11891 [1962] 8p.

DESCRIPTORS: *Fluid dynamic properties, *Glutin, *Starches, Carbohydrates, *Pectins, Colloids.

Described are the results of a study of the structural-mechanical properties of glutinous potato starch, and also of amylose and amylopectin solutions. Expressed is the supposition that the structure in amylose solutions originates on account of coagulation and the following passing over of amylose into a mycrocrystalline state. The development of a structure in glutinous potato starch is explained by the presence of amylose as a binding link between the amylopectin macromolecules which by themselves do not form a structure. (Author)

Matveev, K. I., Osipov, A. M. and others.
CATALYTIC OXIDATION OF ETHYLENE IN THE PRESENCE OF AQUEOUS SOLUTIONS OF PALLADIUM SALTS. [1963] 15p.
Order from ATS $18.50 ATS-13Q67R

Trans. of Kinetika i Kataliz (USSR) 1962, v. 3, no. 5, p. 661-673.

DESCRIPTORS: Salts, *Palladium, Solutions, *Ethylenes, Oxidation, Catalysts.

Mildner.
IMPROVEMENT OF THE ACIDHYDROLYSIS (REPLACEMENT OF AMINO GROUP BY OH) IN SULFURIC ACID SOLUTION THROUGH ADDITION OF PHOSPHORIC ACID SALTS.. 17 Sep 48 [2]p.
Order from OTS or SLA $1.10 63-14808

Trans. of mono. [Verbesserung der Sauren Hydrolyse (Ärsatz der Amino-Gruppe durch Hydroxyl) in Schwefel saurer Losung durch Zusatz von Phosphorsauren Salzen n.p., Apr 36, 3p.] (PB-75420).

DESCRIPTORS: *Amines, Hydrolysis, Substitution reactions, *Sulfuric acid, *Phosphoric acids, Salts.

Milovskaya, E. B. and Dogopol'skaya, P. I.
THE ROLE OF AMINES IN POLYMERIZATION USING ZIEGLER CATALYSTS. [1963] 6p.
Order from ATS $8.00 ATS-58Q70R

Trans. of Vysokomolekul[yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 7, p. 1049-1052.

DESCRIPTORS: *Amines, *Polymerization, Catalysts, Ziegler catalysts.

Miwa, Ichiro, Ueno, Kisaburo, and Ninai, Kiyoaki.
MANUFACTURING PROCESS OF AMINE. July 63, 9p.
Order from SA $19.00 SA Code-P-114

Trans. of published Japanese patent 78/1962, cl. 16-B-31, appl. no. 28297/1959 filed 7 Sep 59, pub. 16 Jan 62, by Toyo Koatsu Industries, Inc.

DESCRIPTORS: *Amines, *Ethyleneamines, Manufacturing methods, *Nitriles, Hydrogenation, *Cobalt catalysts, *Nickel catalysts, Formates.

Nauta, W. Th. and Dienske, J. W.
SOME MESITYLENE DERIVATIVES (FORMING AN ETHER FROM CHLORIDE AND METHYL ALCOHOL) [1963] 9p. (refs. omitted).
Order from SLA $1.10 63-14118

Trans. of Recueil [des] Travaux Chim[iques des Pays-Bas] (Netherlands) 1936, v. 55, p. 1000-1006.

DESCRIPTORS: *Methyl radicals, *Benzenes, Ethers, *Chlorides, *Alcohols, Formaldehyde, Chemical reactions, Sulfur compounds, *Mesityl radicals, Electrical conductance, Dioxides.

By the action of formaldehye and HCl on mesitylene (1-2 mol formaldehyde to 1 mol mesitylene) one or two CH_2Cl groups were introduced into the molecule. In 1'. chloro-1. 2. 4. 6 tetramethyl benzene, the chlorine atom, under the effect of the methyl groups in positions 2, 4 and 6 has a heightened reactivity. These methyl groups have a similar effect also on other substituents in 1' position. This is shown, for example, by the fact that 1'. acetoxy-1. 2. 4. 6. tetramethyl benzene upon heating with methyl alcohol HCl gives a mixture of 1'-methoxy-1. 2. 4. 6-tetramethyl benzene. 1'. chloro-1. 2. 4. 5-tetramethyl benzene has, according to advance measurements, dissolved in fluid sulfur dioxide, an electric conductivity about 10 times that of benzyl chloride. Thus, the dissocation of the chlorine atom at the 1' position is also heightened under the influence of the methyl groups. (Author)

Nazarov, I. N. and Semenovskii, A. V.
ON THE DIRECTABILITY (CONTROLABILITY) OF THE CHLOROMETHYLATION REACTION. [1963] 24p. 18 refs.
Order from OTS or SLA $2.60 63-16185

Trans. of #[Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya] 1957, no. 1 [p. 100-111].

DESCRIPTORS: Methyl radicals, *Chlorides, *Substitution reactions, Control, Ethyl radicals, Phenyl radicals, *Acetates, Benzyl radicals, *Benzenes, *Cumenes, Butyl radicals, *Toluenes, Molecular isomerism.

The study is devoted to an examination of the problem concerning the directability (controlability) of chloromethylation in different compounds of the aromatic series. (Author)

Nazarov, I. N. and Semenovskii, A. V.
THE SPATIAL FACTOR IN ELECTROPHILIC SUBSTITUTION REACTIONS OF AROMATIC HYDROCARBONS, REPT. 2. [1963] 12p. (tables omitted) 10 refs.
Order from OTS or SLA $1.60 63-16184

Trans. of #[Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya] 1957, no. 10 [p. 1229-1234].

DESCRIPTORS: *Substitution reactions, Chlorination, Methylation, Nitration, Propyl radicals, *Butyl radicals, Cyclohexanes, *Benzenes, *Cumenes, Oxidation, Molecular isomerism.

It was shown, that the chloromethylation of n. propyl benzene, n. butyl benzene, isobutyl benzene and cyclohexyl benzene leads to the formation of mixtures of ortho-and parachloromethyl derivatives. There was carried out a comparison of the relationships of ortho- and para-isomers, which were obtained upon the chloromethylation of alkyl benzenes, with analogous data as to their nitration. The observed facts are explained from the point of view of the spatial interactions which take place during these reactions of aromatic, electrophilic substitution (the steric factor). (Author)

Nazarova, L. M.
LIMITED ELECTRON DONOR AND ELECTRON ACCEPTOR CAPACITY OF ATOMS AND GROUPS IN ORGANIC COMPOUNDS. [1963] 8p. 4 refs.
Order from OTS or SLA $1.10 63-18430

Trans. of #Zhur[nal] Obshchei Khimii (USSR) 1962, v. 32, no. 5, p. 1423-1427.

DESCRIPTORS: Organic compounds, *Benzene derivatives, *Furan derivatives, Nitro radicals, Halides, Furaldehydes, Mucic acids, *Electrons, Atomic energy levels, *Dipole moments, Vector analysis.

The assumption is stated that the change of charge of atom, or atomic group, in organic molecules, arising as a consequence of mutual interaction of atoms and atomic groups, is limited by certain limits, both with respect to electron donor and to electron acceptor capacity. From the viewpoint of this assumption, the dipole moments of nitro- and halogenated derivatives of benzene and furan and also of nitro- derivatives of furan were examined. It is shown that the assumption about limited donor-acceptor capacity allows us correctly to calculate the dipole moments of derivatives of furan as vector sums of moments of bonds and atomic groups with calculation of mutual interaction of atoms. (Author)

Nekrasova, V. A.
THERMIC CHLORINATION OF ALKANES AND THEIR MONOCHLOR DERIVATIVES. [1963] 4p. (figs. omitted)

Order from OTS or SLA $1.10 63-14145

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1953, v. 88, no. 3, p. 475-478.
Other translations are available from ATS as RJ-109, 6p. and from OTS or ETC $1.55 as 61-17313, MTWL-730, 6p.

DESCRIPTORS: *Chlorination, Thermochemistry, *Hydrocarbons, Synthesis (Chemistry), *Chlorides, *Alkanes.

Nekrasova, V. A. and Shuikin, N. I.
THE ISOLATION OF COMPLEXES OF UREA WITH STRAIGHT-CHAIN ALKANES. [1963] 2p.
Order from ATS $5.00 ATS-67Q69R

Trans. of # Akad[emiya] Nauk SSSR. Otd[elenie] Khim[icheskikh] Nauk. Izv[estiya] 1963. no. 1, p. 186-187.

DESCRIPTORS: *Methanes, *Urea, Complex compounds, Isolation.

Nesmayanov, A. N. and Vol'kenau, N. A.
SOME CHROMIUM AREN CARBONYLS. 12 Dec 61, 5p. (some formulas omitted) 10 refs.
Order from OTS or SLA $1.10 63-14084

Trans. of #Akad[emiya] Nauk SSSR. Otdel[enie] Khim[icheskikh] Nauk, 1961 [no. 2] p. 367-368.

DESCRIPTORS: *Chromium compounds, *Carbonyl radicals, *Benzenes, *Methanes, *Stilbenes, *Azides, *Phenyl radicals, Chemical properties, Physical properties, Complex compounds.

As a reaction of chromium hexacarbonyl with diphenyl methane, trans-stilbene and 5.12-dihydrotetrazene were obtained diphenyl methane chromium tricarbonyl, stilbene chromium tricarbonyl and 5.12 dihydrotetrazene chromium tricarbonyl. Tolane, on reaction with $Cr(CO)_6$, forms hexaphenyl benzol. Tetrazene does not react with $Cr(CO)_6$. In no case was bis-(chromium tricarbonyl) obtained. (Author)

Nicolai, H.-J.
PROCESS FOR THE PRODUCTION OF POLYCARBONATES. [1963].
Order from TTIS $7.20 TTIS NS-83

Trans. of East German patent 24,170, appl. 13 June 59, pub. 29 Nov 62.

DESCRIPTORS: *Carbonates, *Polymers, Synthesis (Chemistry).

Nikishin, G. I. and Mustafaev, R. I.
FREE RADICAL ADDITION OF CHLOROACETIC ACID AND ITS METHYL ESTER TO α-OLEFINS. [1963] 8p.
Order from ATS $7.50 ATS-47Q69R

Trans. of #Akad[emiya] Nauk SSSR. Otd[elenie] Khim[icheskikh] Nauk. Izv[estiya] 1963, no. 2, p. 359-364.

DESCRIPTORS: *Ethylenes, *Methyl radicals, Esters, *Acetic acids, *Chlorides, Additives, *Free radicals.

Oppenheim, Alphons and Vogt, George.
ON A NEW MODE OF FORMATION OF RESORCIN. [1963] 4p.
Order from SLA $1.10 63-14403

Trans. of [Justus Liebigs] Annalen d[er] Chem[ie]. Suppl[ementband] (Germany) [1869] v. 6, p. 376-380.

DESCRIPTORS: *Resorcinol, Synthesis (Chemistry), Chlorides, Sulfonic acids, Phenols, Sulfonic acid.

Pakhomov, A. M.
CONCERNING THE RADICAL MECHANISMS OF THERMAL DECOMPOSITION OF CELLULOSE AND THE FORMATION OF LEVOGLUCOSAN. [1963] 5p. 15 refs.
Order from OTS or SLA $1.10 63-16380

Trans. of #Ak[ademiya] Nauk SSSR. Otd[elenie] Khim-[icheskikh] Nauk. Izvestiya, 1957 [no. 12] p. 1497-1499.

DESCRIPTORS: Cellulose chemistry, *Cellulose, Pyrolysis, Theory, *Free radicals, *Carbohydrates, Anhydrides, *Hemicellulose, Fructose, Glucose.

A hypothesis is expressed concerning the radical mechanisms of thermal decomposition of cellulose in a vacuum and of the formation of levoglucosan. It was shown that the radical mechanism agrees with existing experimental data on the chemistry of free radicals. (Author)

Petrov, K. A., Nifant'ev, E. E., and Novoselov, N. N.
SYNTHESIS OF POLYPHOSPHONATES BY TRANSESTERIFICATION OF ARYL PHOSPHONATES WITH GLYCOLS. Pt. 4 [of] Phosphorus-Containing Polymers. [1963] 6p.
Order from ATS $8.20 ATS-85Q68R

Trans. of Vysokomolekulyarnye Soedineniya] (USSR) 1962, v. 4, no. 8, p. 1214-1218.

DESCRIPTORS: Esterification, Synthesis (Chemistry), *Phosphorus, *Polymers.

Petrov, K. A., Nifant'ev, E. E. and others.
SYNTHESIS OF POLYPHOSPHITES AND POLYPHOSPHONITES FROM GLYCERAL AND PENTAERYTHRITOL. PT. 5 [of] Phosphorus-Containing Polymers. [1963] 5p.
Order from ATS $7.50 ATS-86Q68R

Trans. of Vysokomolekul [yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 8, p. 1219-1222.

DESCRIPTORS: PETN, Phosphites, Synthesis (Chemistry), *Phosphorus, *Polymers.

Plattner, P. A. and Geiger, M.
THE ACID CHLORIDE OF BETAINE-HYDROCHLORIDE AND ITS USE IN THE PRODUCTION OF WATER-SOLUBLE ALCOHOL AND AMINE DERIVATIVES. [1963] 16p. 20 refs.
Order from SLA $1.60 63-14595

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1945, v. 28, p. 1362-1370.

DESCRIPTORS: Chlorides, Acylation, Production, *Alcohols, *Glycines, *Amines.

Roche, J. and Mourgue, M.
LIBERATION OF LEUCINE AND VALINE IN THE COURSE OF PROTEIN HYDROLYSIS AND THE POSITION OF THESE AMINO ACIDS IN THE PROTEIN MOLECULE. A NOTE. [1963] 4p. 3 refs.
Order from SLA $1.10 63-14598

Trans. of Acad[emie] des Sciences, Paris. Comptes Rendus (France) 1944, v. 218, p. 610-612 (pub. by Gauthier-Villars et Cie., Paris).

DESCRIPTORS: *Leucine, *Valine, *Proteins, Hydrolysis, Amino acids, *Molecular structure.

Leucine and valine occupy specific positions in protein molecules. The major portion of leucine is liberated at the beginning of hydrolysis (acid, alkaline, or pancreatic). On the basis of this fact, a large fraction of leucine may be regarded as the terminal amino acid in the polypeptide chain. Thus the distribution of leucine and valine in the protein molecule would seem to exemplify the periodicity anticipated in Bergmann's theory, leucine occupying predominantly the exopeptidic, and valine, the endopeptidic, positions. Finally, the different course of hydrolysis observed with the various studied proteins (casein, edestin, globin and zein) shows that their structure is not identical. (Author)

Rudkovskii, D. M. and Trifel, A. G.
SYNTHESIS OF ETHYL CHLORIDE FROM ETHYLENE AND HYDROGEN CHLORIDE IN THE PRESENCE OF ALUMINUM CHLORIDE (PRELIMINARY COMMUNICATION). [1962] 7p. 6 refs.
Order from OTS or SLA $1.10 63-10981

Trans. of [Trudy Opytno-Issledovatel'skogo Zavoda "Khimgaz"] (USSR) 1936, v. 3, p. 202-208.

DESCRIPTORS: *Ethanes, *Chlorides, *Ethylenes, *Hydrogen compounds, *Aluminum compounds, Synthesis (Chemistry), Catalysts.

Semechkina, A. F. and Shorygina, N. N.
THE STRUCTURE OF LIGNIN. Dec 62 [5]p. 17 refs.
FPRB Trans. No. 156.
Order from NRCC NRCC C-4462

Trans. of [Akademiya Nauk Latviiskoi SSR, Riga. Institut Lesokhozyaistvennykh Problem i Khimii Drevesiny. Trudy] 1960, v. 19, p. 65-70.

DESCRIPTORS: *Lignin, Decomposition, Sodium compounds, Ammonia, Phenols, Chemical analysis, Paper chromatography, *Molecular structure, Chemical bonds, Sterochemistry.

Shilov, A. E., Shilova, A. K., and Bobkov, B. N.
REACTION OF α-OLEFINS WITH SOLUBLE ZIEGLER-TYPE COMPLEX CATALYSTS AND THE INITIATION MECHANISM OF ETHYLENE POLYMERIZATION. [1963] 9p.
Order from ATS $12.75 ATS-65Q67R

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1962, v. 4, no. 11, p. 1688-1695.

DESCRIPTORS: *Ethylenes, Polymerization, *Catalysts, Solubility, Chemical reactions, Ziegler catalysts.

Shilov, E.
ON THE FORMATION β, β'-DICHLORODIETHYLETHER IN THE SYNTHESIS OF 2-CHLOROTHANOL. [1963] 4p. 6 refs.
Order from OTS or SLA $1.10 63-14136

Trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U. R. S. S., 1945, v. 47, no. 7, p. 472-474.
An Abstract trans. is available from OTS or SLA $1.10 in 62-10788 [1962] 2p.

DESCRIPTORS: *Diethyl ethers, *Ethanols, Chlorine compounds, Synthesis (Chemistry).

Stoltzenberg, Hugo.
A COMPILATION OF USEFUL DATA ON BETAINE AND ITS SALTS. [1963] 4p. 1 ref.
Order from SLA $1.10 63-14602

Abstract trans. of [Hoppe-Seyler's] Z[eitschrift fur] Physiol[ogische] Chem[ie] (Germany) 1914, v. 92, p. 445-494.

DESCRIPTORS: Salts, *Glycines, Synthesis (Chemistry), Acids, Halogens, Amines, Solubility.

Vancso, S. I. and Maros, L.
MALEATE-FUMARATE ISOMERIZATION DURING THE PREPARATION OF POLYGLYCOL FUMARATES; THE EFFECT OF ISOMERIZATION ON THE REACTIVITY OF COPOLYMERIZATION (PRELIMINARY COMMUNICATION). [1963] 4p.
Order from ATS $5.00 ATS-18Q70H

Trans. of Magy[ar] Kem[iai] Folyoirat (Hungary) 1959, v. 65, no. 7, p. 280-281.

DESCRIPTORS: *Maleic acid, *Fumaric acid, Molecular isomerism, *Polymers, *Glycols, Chemical reactions, Synthesis (Chemistry) *Copolymerization.

Vol'pova, E. G. and Ogloblina, L. I.
POLYMERIZATION OF PROPYLENE ON SILICO-TUNGSTIC ACID CATALYSTS. [1963] 6p.
Order from ATS $8.25 ATS-38Q69R

Trans. of Khim[iya] i Tekhnol[ogiya] Topliv i Masel (USSR) 1963, v. 8, no. 1, p. 19-24.

DESCRIPTORS: Catalysts, *Tungstic acid, *Silicon compounds, *Propenes, Polymerization.

Volynkin, N. I.
METHOD OF OBTAINING HYDROQUINONE OR ITS ALKYL-DERIVATIVES BY MEANS OF CATALYTIC OXIDATION OF BENZENE, PHENOL, OR ALKYLATED PHENOL. [1963] 3p.
Order from OTS or SLA $1.10 63-14750

Trans. of USSR patent 112,923, cl. 12_o, 14_{o2}, registered 11 Feb 57 under 566,358.

DESCRIPTORS: *Hydroquinone, *Quinones, *Alkyl radicals, *Benzenes, *Phenols, Oxidation, Catalysis, Oxides, Iron catalysts.

The invention involves a method of obtaining hydroquinone or its alkyl-derivatives by catalytic oxidation of benzene, phenol, or alkylated phenol up to the corresponding quinone with subsequent reduction of the latter, characterized by the fact that, in order to increase the yield and intensify the process, the mixture of vapors of benzene, phenol, or substituted phenol, with the air and water vapors is passed over a catalyzer at a temperature over 500°, followed by washing of the steam-gas mixture with water, so as to dissolve the organic acid, and passing the mixture through a hot aqueous suspension of cast iron chips. (Author)

Zakharkin, L. I., Okhlobystin, O. Yu., and Strunin, B. N.
THE USE OF ORGANOMAGNESIUM COMPOUNDS FOR THE SYNTHESIS OF ORGANIC DERIVATIVES OF THE ELEMENTS OF GROUPS II-V IN AN ETHERLESS MEDIUM. [1963] 8p.
Order from ATS $9.00 ATS-11Q70R

Trans. of #Akad[emiya] Nauk SSSR. Otd[elenie] Khim[icheskikh] Nauk. Izv[estiya] 1962, no. 11, p. 2002-2008.

DESCRIPTORS: Group II elements, Group III elements, Group IV elements, Group V elements, Oxygen, *Magnesium compounds, Organic compounds, Synthesis, Vacuum apparatus.

Physical Chemistry

METHOD FOR THE CONTINUOUS CRYSTALLIZATION OF SOLIDS OUT OF THEIR SOLUTIONS. [1963] 8p. 3 refs.
Order from OTS or SLA $1.10 63-14513

Trans. of Netherlands patent 65,772, appl. 135,804, submitted 4 Nov 47, pub. 15 Dec 49.

DESCRIPTORS: *Crystallization, Solids, Solutions, Cooling, Oils, *Anthracenes, *Calcium compounds, Nitrates, Phosphates, Tanks (Containers).

A method for the crystallization of solids out of a solution by rapid cooling, by continuously passing the solution into a tank, from which the crystal mass thus obtained is continuously removed is described. In the tank is an apparatus designed to keep the solution in motion and to keep the wall free from crystals. The tank is cooled only at the wall, with maintenance of a difference in temperature which promotes the production of small crystals. Part of the solution is led by means of a current toward the cooled wall, which results in crystallization and crystal growth, whereupon the crystals are led by means of a current directed away from the cooled wall toward the warmer inner part of the tank. Solution of the small crystals takes place, and the remaining crystals are again carried along with the current directed toward the wall. (Author)

Akhumov, E. I. and Ezerova, E. A.
ELECTROLYSIS OF SODIUM CHLORIDE IN LIQUID AMMONIA. III. INVESTIGATION OF SOLUBILITY IN THE TERNARY SYSTEM NaCl-NH_4Cl-NH_3. [1963] [17]p. 20 refs.
Order from OTS or SLA $1.60 63-18044

Trans. of Zhurnal Obshchei Khimii (USSR) 1936, v. 6, no. 10, p. 1418-1429.
Another trans. is available from LC or SLA mi$2.40, ph$3.30 as 60-17714, TVA-3717, 13 May 58, 19p.

DESCRIPTORS: *Phase studies, *Electrochemistry, *Sodium compounds, *Ammonium compounds, Chlorides, *Ammonia, Solubility, Thermodynamics, Electrolysis, Platinum electrodes.

Blyumberg, Ya. B. and Zdanovskii, A. B.
SOLUBILITY IN THE SYSTEM $(NH_4)_2SO_4$ + 2HCl = H_2SO_4 + $2NH_4Cl$ at 25°. [1963] 9p. 8 refs.
Order from OTS or SLA $1.10 63-18045

Trans. of Zhurnal Obshchei Khimii (USSR) 1939, v. 9, no. 9, p. 814-818.

DESCRIPTORS: *Phase studies, *Ammonium compounds, Sulfates, Chlorides, Hydrochloric acid, *Sulfuric acid, Solubility.

If the partial pressure of a gas is fixed, a saturation field in good agreement with the phase-rule can be obtained for it. Apart from the ordinary solid phase fields and the field of gaseous HCl, the solubility in the system $(NH_4)_2SO_4$ + 2HCl = H_2SO_4 + $2NH_4Cl$, studied with the aid of a Le Chatelier-Yenekke diagram at t^o = 25°, also has a nonacqueous field of unsaturated H_2SO_4 solutions. Not one of the four-component invariant points of this system is congruent. Congruent points were only found in the region of three-component systems. (Author)

Borisov, V. M.
METHOD OF THE PHYSICO-CHEMICAL EVALUATION OF THE REAGENT INTERACTION WITH THE MINERAL GRAIN SURFACES DURING FLOTATION. [1963] 9p. (figs. omitted) 10 refs.
Order from OTS or SLA $1.10 63-16258

Trans. of Khimicheskaya Promyshlennost' (USSR) 1954, no. 6, p. 336-338.

DESCRIPTORS: Flotation (Separation), *Grain structures (Metallurgy), *Minerals, *Reagents, Chemical analysis, Surfaces, Fertilizers.

Chiolan, I. and Kornilesku, A.
DETERMINATION OF THE EQUILIBRIUM CURVES OF BINARY MIXTURES ISOBUTANOL-XYLENES (o, m, p). [1963] 6p. 4 refs.
Order from OTS or SLA $1.10 63-18413

Trans. of #Zhur[nal] Fiz[icheskoi] Khim[ii] (USSR) 1962, v. 36 [no. 5] p. 1010-1015.

DESCRIPTORS: *Laboratory equipment, Design, *Phase studies, Thermodynamics, *Butanols, *Xylenes, Mixtures, *Chemical equilibrium.

Apparatus for studying the liquid-vapor equilibrium was constructed and an investigation of systems formed by isobutanol with o-, m-, and p-xylenes, was carried out. Calculation of activity coefficients of the mixture components was effected. (Author)

Chmelir, M.
FOLLOWING PIGMENT CHANGES DURING GRINDING. [1963] 1500 words.
Order from TTIS $13.50 TTIS NS-105

Trans. of Chemicky Prumysl (Czechoslovakia) 1962, v. 12 [37] [no. 12] p. 655-658.

DESCRIPTORS: *Pigments, Material removal, Grinders.

Dervichian, D. G.
THE PHASE EQUILIBRIUM IN COLLOIDAL SOLUTIONS [Das Phasengleichgewicht in Kolloiden Lösungen]. [1963] 11p. (figs. omitted) 34 refs.
Order from SLA $1.60 63-16474

Trans. of Kol[loid-Zeit[schrift] (West Germany) 1949, v. 115 [no. 1/3] p. 76-82.

DESCRIPTORS: *Phase studies, *Colloids, Proteins, *Albumins, Salts, *Cellulose acetates, *Soaps, Solvents, Water, Chloroform, Ethanols, Solutions, Chemical precipitation.

The domains of existence were determined for the different types of phases (isotropic solutions, isotropic liquid precipitates, anisotropic liquid precipitates and solid precipitates) that can exist together in different colloidal systems when one varies the solubility conditions by adding salt or a solvent. The systems which were studied are protein solutions in water in the presence of salt, cellulose acetate solutions in the mixture of chloroform and ethyl alcohol, and aqueous solutions of soap in the presence of salt. The representative diagrams of the different existence regions and phase equilibria have the same general behaviour for very different colloidal systems. The question of knowing to what extent the diagrams can be compared to real phase diagrams, was discussed and to what extent the phase rule can be applied to colloidal systems. (Author)

Dukelskii, V. M. and Ionov, N. I.
FORMATION OF NEGATIVE HALOID IONS BY INTERACTION BETWEEN ALKALI-HALOID SALTS AND AN INCANDESCENT TUNGSTEN SURFACE. [1963] 15p. 11 refs.
Order from OTS or SLA $1.60 63-14464

Trans. of Zhur[nal] Eksper[imental'noi] i Teoret[icheskoi] Fiz[iki] (USSR) 1940, v. 10, p. 1248-1256.

DESCRIPTORS: *Halides, *Ions, *Alkali metal compounds, *Electric currents, *Tungsten, Ionization, Atomic energy levels.

A phenomenon is discovered involving formation of negative ions when KF, NaCl, KCl, RbCl, NaBr, KBr, RbBr and KJ molecules interact with an incandescent tungsten surface. A method is given for determining electron affinity energy of haloid atoms by measuring currents of positive and negative ions which are formed by ionization of alkali-haloid molecules on an incandescent surface. The electron affinity energy of fluorine (4.11 ev), chlorine (3.71 - 3.78 ev), bromine (3.64 ev) and iodine (3.31 ev) atoms is determined by this method. (Author)

Eremin, E. N.
ON THE KINETICS OF THE ELECTRO-CRACKING OF METHANE. [1963] 8p. 18 refs.
Order from OTS or SLA $1.10 63-18418

Trans. of Zhur[nal] Fiz[icheskoi] Khim[ii] (USSR) 1958, v. 32, no. 11, p. 2543-2549.
Another trans. is available from ATS $12.55 as ATS-52N51R [1961] 7p.

DESCRIPTORS: Hydrocarbons, *Methanes, Degradation, Reaction kinetics, *Electrolysis, Effectiveness.

In studying the electro-cracking of methane (and of other hydrocarbons) it was established that the quantity of the compound reacting is proportional to the energy of the discharge and to the fraction of the remaining initial hydrocarbon. In another interpretation the electro-cracking is a first order reaction, the rate constant being proportional to the energy of the discharge and inversely proportional to the initial quantity of hydrocarbon. As characteristics of the kinetics of the process the conception of the energy efficiency of the discharge with respect to methane electro-cracking has been introduced with the dimensions: quantity of hydrocarbon/energy. The physical meaning of the energy efficiency is the quantity of hydrocarbon reacting per unit of energy consumption in the initial period of the reaction, i.e. at zero conversion. It has been shown that the energy efficiency of the forms of discharge active with respect to methane is practically independent of the geometrical dimensions of the discharge, of the current density, of the power and of the amount of dilution or the initial gas with hydrogen, and decreases with increasing pressure. (Author)

Glebov, G. D.
ABSORPTION OF GASES BY ACTIVE METALS. 13 Mar 63 [19]p. FTD-TT-62-1764.
Order from OTS $0.50 63-11659

Unedited rough draft trans. of mono. Pogloshchenie Gazov Aktivnymi Metallami, Moscow/Leningrad, 1961, p. 157-173.

DESCRIPTORS: Metals, *Niobium, *Tantalum, Gases, *Oxygen, *Hydrogen, *Nitrogen, Absorption, Niobium compounds, Tantalium compounds, Oxides, Hydrides, Nitrides, Crystal structure, Thermodynamics, Reaction kinetics

Data are given concerning the reactions of hydrogen, nitrogen and oxygen with niobium and tantalum, and the compounds formed thereby.

Gonikberg, M. G
ON LIQUID-GAS PHASE EQUILIBRIA UNDER PRESSURE. [1963] 4p. 5 refs.
Order from OTS or SLA $1.10 63-14847

Trans. of [Zhurnal Fizicheskoi Khimii] (USSR) 1949, v. 23 [no. 7] p. 861-862.

DESCRIPTORS: *Phase studies, Liquids, Gases, Pressure, *Nitrogen, *Hydrogen, *Benzenes, Solubility.

Imelik, Boris and François-Rossetti, Jeannine.
REMARKS ON THE METHODS OF CALCULATION OF THE DISTRIBUTION OF PORES AND ON THE FORM OF ISOTHERMS. Rept. no. 2 of the Study of the Porosity of solids (Remarques sur les Méthodes de Calcul de Distribution des Pores et sur la Forme des Isothermes. (2e Mémoire) Étude de la Porosité des Solides). [1962] [18]p. (foreign text included) 10 refs.
Order from SLA $1.60 62-14568

Trans. of Société Chimique de France. Bulletin, 1957 [no. 2] p. 153-158.

DESCRIPTORS: *Solids, *Porosity, Determination, Volume, *Adsorption.

The comparison of analytic data of a rather large number of isotherms permite several practical results to be disengaged concerning the utilization of methods of calculation of the distribution of pores. The importance of the choice of the thickness of the adsorbed multilayer is more particularly studied. Several ordinary methods of calculation are compared in order to disengage the least tedious method, but whose accuracy is still sufficient enough for routine work. Finally, the second part of the report is devoted to the study of the form of isotherms. (Author)

Jeanprost, Charles.
PROCESS OF SEPARATING SALTS AND THEIR MIXTURES. [1963] 2p.
Order from OTS or SLA $1.10 63-14516

Trans. of French patent 669,100, appl. 24 Apr 28, pub. 12 Nov 29.

DESCRIPTORS: *Salts, Material separation, *Flotation (Separation), *Nitrates, *Chlorides, *Sulfates, Mixtures.

The invention concerns the use of a saturated solution of the soluble part of a mixture to be treated as a medium permitting the separation into several parts of the said mixture introduced in a state of suspension into the solution; the said separation being effectuated by means of a physical-chemical process. (Relative or absolute floatability with or without reagents, conductibility, permeability and dielectric power). (Author)

Kireev, V. A. and Nikiforova, V. A.
DETERMINATION OF THE VAPOR PRESSURE OF PROPYLENE DICHLORIDE, ETHYLENE CHLOROHYDRIN AND PROPYLENE CHLOROHYDRIN. [1963] 2p. 1 ref.
Order from OTS or SLA $1.10 63-16036

Trans. of [Zhurnal Obshchei Khimii] (USSR) 1936, v. 6 [no. 1] p. 75-77.

DESCRIPTORS: *Propenes, Chlorides, *Ethylenes, *Halohydrins, *Vapor pressure, Determination, Tables.

Kir'yakov, G. Z. and others.
ELECTROLYSIS OF ZINC SULPHATE SOLUTIONS WITH ADDITIONS OF SURFACE-ACTIVE AGENTS (Elektroliz Sernokislykh Rastvorov Tzinka s Poverkhnostno-Aktivnymi Dobavkami). Oct 62 [13]p. 10 refs. RTS-2130.
Order from OTS or SLA $1.60 63-15246

Partial trans. of mono. Trudy Soveshchaniya po Voprosam Vliyaniya Poverkhnostno-Aktivnykh Vestchestv na Elektrosazhdenie Metallov (Conference on Problems of the Influence of Substances which lower Surface Tension on the Electrodeposition of Metals [Vilnyus, 17-19 May 56]) 1957.

DESCRIPTORS: *Electrolysis, *Zinc compounds, *Sulfates, *Surface-active substances, Surface tension, *Electrodeposition, *Phenols, *Amines, Molecular isomerism.
Phenols and amines had a surface active effect up to high current densities in zinc sulfate solutions. The para-isomers of phenols were more active than ortho- and meta-isomers and they increased cathode polarization. The current efficiency of zinc and the cathode polarization are not always directly related. Amidol strongly polarized the cathode, but the main process was liberation of hydrogen. Hydroquinone suppressed the discharge of hydrogen ions while the current efficiency of zinc was high. When metal ions more electropositive than zinc were added to the electrolyte, besides the amines and phenols, depolarization of the cathode resulted and the current efficiency of zinc decreased. The ions which were more electropositive than zinc ions were deposited with the zinc.

Kiselev, A. V., Kovaleva, N. V. and others.
ADSORBATE-ADSORBATE INTERACTIONS IN VAPOR ADSORPTION ON GRAPHITIZED CARBON BLACKS II. APPLICATION OF ADSORPTION ISOTHERM EQUATIONS TO THE DESCRIPTION OF EXPERIMENTAL DATA. Lomonosov lecture, Moscow U., 22 Oct 57. [1963] 19p. 29 refs.
Order from OTS or SLA $1.60 63-14709

Trans. of #Kolloidnyi Zhurnal (USSR) 1958, v. 20, no. 4, p. 444-455.

DESCRIPTORS: *Adsorbtion, *Carbon black, Graphite, Vapors, *Hydrocarbons, *Nitrogen, *Argon, *Krypton, *Sulfur compounds, Dioxides, *Ammonia, *Amines, Methyl radicals, *Methanols, *Water vapor, Thermodynamics, Equations.

Various equations for mono- and polymolecular adsorption isotherms, pertaining to homogeneous surfaces, in which account has been made of adsorbate-adsorbate interaction have been applied to reported experimental data on the adsorption of hydrocarbons, nitrogen, argon, krypton, sulfur dioxide, ammonia, methylamine, methanol and water vapors. Approximate equations for mono- and polymolecular adsorption

isotherms containing the equilibrium constants K'_1 of adsorbate-adsorbent and K_n of adsorbate-adsorbate interaction satisfactorily describe the experimental data in the region of mono-and of the initial stages of polymolecular adsorption above the critical temperature of the adsorption layer. As the adsorbate-adsorbent interactions weaken and the adsorbate-adsorbate relatively increase, the isotherms change their shape from convex at the initial part with single points of inflection (n - alkanes) to initially concave, (with two points of inflection nitrogen, argon, krypton, sulfur dioxide, methylamine, methanol) and to concave throughout with no inflection (water). The ammonia adsorption isotherm is concave over a broad range of relative pressures. (Author) (See also 63-10176)

Krause, A., Wolski, W., and Kryinski, K.
CATALYTIC OXIDATION OF ARSENIC IN THE PRESENCE OF $Cu(OH)_2$ AS A CATALYST AND THE ACTIVATION OF THE CATALYST. [1963] 7p.
Order from ATS $11.50 ATS-02Q68P

Trans. of Roczniki Chem[ii] (Poland) 1957, v. 31, no. 3, p. 793-800.

DESCRIPTORS: *Catalysts, *Arsenic, Oxidation, Catalysis, *Copper compounds, *Hydroxides.

Lestienne, A.
ELECTROCHEMICAL ANALYSIS OF SUBSTANCES IN THE GASEOUS STATE. [1963] 3p.
Order from ATS $3.00 ATS-73Q70F

Trans. of [Academie des Sciences, Paris]. Compt[es] Rend[us] (France) 1962, v. 255, p. 912-913 (pub. by Gautheir-Villars et Cie., Paris).

DESCRIPTORS: *Electrochemistry, *Chemical analysis, *Gases.

Nalbandyan, A. B. and Gorban', N. I.
DETERMINATION OF THE RATE CONSTANT FOR THE REACTION $H+CH_4=H_2+CH_3$ (Opredelenie Konstanty Skorosti Reaktsii H CH_4 H_2 CH_3). [1962] [7]p. 8 refs.
Order from OTS or SLA $1.10 63-15456

Trans. of Akad[emiya] Nauk Armyanskoi SSR [Erevan]. Doklady, 1961, v. 33, no. 2, p. 49-52.

DESCRIPTORS: *Hydrogen, *Methanes, *Formaldehyde, Ignition, Oxidation, Reaction kinetics, Chemical equilibrium, Heat of activation.

Neumann, Karlheinz.
PROCEDURE FOR FREEZE DRYING OF SENSITIVE SUBSTANCES. [1963] [4]p.
Order from OTS or SLA $1.10 63-14792

Trans. of German patent 1,028,741, cl. 30h 2/04, appl. 21 June 56, pub. of appl. and issuance of specifications 24 Apr 58, issued 9 Oct 58 (agreeing with specifications 1,028,741 L 28895 IVa/30h).

DESCRIPTORS: *Freeze drying, Sensitivity, Colloids, Inorganic compounds, Vinyl radicals, Pyrrolidinone, Gelatin, Preservation.

Orsini, Paola Giordano and Jannelli, Liliana.
A STUDY OF THE SYSTEM PYRIDINE-BENZENE. NOTE II. CRYOSCOPIC BEHAVIOR. [1963] 21p. (figs. omitted) 15 refs.
Order from SLA $2.60 63-18010

Trans. of Gazz[etta] Chim[ica] Ital[iana] 1957, v. 87, p. 159-170.

DESCRIPTORS: *Phase studies, Thermodynamics, Freezing, Molecular weight, *Pyridines, *Benzenes, Eutectics, *Dipole moments, Electric moments, Determination.

Schliephake, O., Nagel, A. v., and Schemel, J.
INVESTIGATIONS CONCERNING THE EXPLOSIVE COMBUSTION OF AMMONIA IN MIXTURES WITH AIR. [1963] 14p. (figs. omitted).
Order from SLA $1.60 63-14130

Trans. of [Angewandte Chemie] (Germany) 1930, v. 43, p. 302-308.

DESCRIPTORS: Air, Mixtures, *Ammonia, *Combustion, *Explosions, *Explosive gases.

Sergienko, S. R., Davydov, B. E. and others.
CERTAIN PHYSIOCOCHEMICAL PROPERTIES OF PETROLEUM ASPHALTENES AND TARS IN SOLUTION. [1963] 11p. 5 refs.
Order from OTS or SLA $1.60 63-18054

Trans. of Akademiya Nauk SSSR. Institut Nefti. Trudy, 1958, v. 12, p. 76-82.

DESCRIPTORS: *Petroleum, *Tar, *Bitumens, Asphalt, Solutions, Physical properties, Chemical properties, Molecular weight, Polarization, Dielectric properties, Molecular association, Solvents, Benzenes, Nitrobenzenes, Naphthalenes.

Solutions of tars and asphaltenes in benzene, nitrobenzene, and naphthalene were measured cryoscopically, and the association of tars and asphaltenes from Romashki oil in the solutions was shown to depend on solvent polarity and temperature. The phenomenon of association of tars and asphaltenes in solutions and its dependence on concentration and temperature, were also studied thru polarization measurements; this enabled us to find a qualitative difference between asphaltene and tar solutions, expressed in the opposite character of their temperature dependences of polarization (in the concentration range up to 10--12%). It was shown that in solutions of tars and asphaltenes in naphthalene at temperatures near 80° and in the concentration range up to 16--18% association phenomena do not occur to any appreciable degree, which makes it possible to obtain consistent results on determination of the molecular weights of tars and asphaltenes by the cryoscopic method in naphthalene in a wide concentration range (2--18%). The molecular weights of tars, determined at concentrations not over 3.5% in nitrobenzene or 2% in benzene, are practically the same as those determined in naphthalene. (Author)

Shidlovskii, A. A. and Shmagin, L. F.
THERMAL DECOMPOSITION AND BURNING OF AMMONIUM PERCHLORATE. 19 Feb 63 [9]p. 31 refs.
FTD-TT-62-1902; AD-298 657.
Order from OTS or SLA $1.10 63-19256

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Khimiya i Khimicheskaya Tekhnologiya (USSR) 1962, v. 5, no. 4, p. 529-532.

DESCRIPTORS: *Ammonium radicals, *Perchlorates, Chlorides, *Pyrolysis, *Combustion, Catalysts, *Thermochemistry, Inorganic compounds, Potassium compounds, Chromates, Manganese compounds, Oxides, Permanganates, Copper compounds, Catalysis, Decomposition.

Catalytic additions of compounds of elements with a variable valence, namely Cu_2Cl_2 and MnO_2, considerably lower the flash point of the ammonium perchlorate. Ammonium perchlorate without additions does not burn at atmospheric pressure, room temperature, and tube diameter of 22 mm. It acquires the ability to burn under these conditions when we add to it not less than 5% MnO_2 or $KMnO_4$, not less than 2% $CuCl_2 \cdot 2H_2$, or not less than 0.5% Cu_2Cl_2 (the last addition was tested with a tube diameter of 34 mm). The addition of 20% glucose to ammonium perchlorate (with a catalytic addition of Cu_2Cl_2) only slightly increases its burning velocity. This fact indicates that the leading process is the burning of ammonium perchlorate as an individual substance, whereas oxidation of the combustible substances is a secondary process accomplished by the combustion products of ammonium perchlorate. (Author)

Shushunov, V. A. and Shlapnikov, Yu. A.
KINETIC METHOD OF PHYSICAL CHEMICAL ANALYSIS. III. KINETIC REACTION OF THE TERNARY ALLOYS Na + Pb + Mg WITH THE VAPORS OF ETHYL CHLORIDE. [1963] 10p. (figs. omitted) 7 refs.
Order from OTS or SLA $1.10 63-16041

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1948, v. 22 [no. 2] p. 157-160.

DESCRIPTORS: *Phase studies, Chemical analysis, *Sodium alloys, *Lead alloys, *Magnesium alloys, *Ethanes, Chlorides, Vapor pressure, Ethyl radicals, Lead, Synthesis (Chemistry), Reaction kinetics.

It was established that the addition of magnesium to NaPb alloy does not modify the character of the kinetic curves of the reaction forming tetraethyllead. The relationship between the induction period and the temperature is also unchanged by this addition. It was shown that the addition of up to 0.2% magnesium to a lead-sodium alloy notably decreases the induction period. A further increase of the magnesium concentration in the alloy produces an increase of the induction period. (Author) (See also 63-10977)

Traube, J. and Whang, Siar-hong.
ON FRICTION CONSTANTS AND WALL LAYER [PT.] I. [1962] 23p. 18 refs.
Order from SLA $2.60 62-16454

Trans. of Z[eitschrift fűr] Physikal[ische] Chem[ie] Leipzig (Germany) [1928] v. 138A, no. 1/2, p. 102-122.

DESCRIPTORS: *Friction, Surface tension, *Permeability, Fluid flow.

Treadwell, W. D. and Werner, W.
THE DETERMINATION OF THE VAPOR PRESSURES OF SOLID CESIUM, RUBIDIUM, AND POTASSIUM CHLORIDE BY THE ENTRAINMENT METHOD IN A STREAM OF NITROGEN. [1963] [14]p. 23 refs.
Order from SLA $1.60 63-16871

Trans. of Helvetica Chimica Acta (Switzerland) 1953, v. 36, p. 1436-1444.

DESCRIPTORS: *Cesium compounds, *Rubidium compounds, *Potassium compounds, *Chlorides, Sublimation, *Vapor pressure, Determination, *Nitrogen, Entropy, Volumetric analysis.

The sublimation pressures of cesium, rubidium and potassium chloride were determined according to the transport method with the use of nitrogen as the transport gas to be in the respective temperature ranges of 507° to 635°C for CsCl, 558 to 675°C for RbCl and 582 to 751° for KCl. The alkali chloride sublimate obtained was determined by means of electromatic titration with 0.01 and 0.001N $AgNO_3$ and the pressures calculated under the hypothesis that the salt vapors consist only of single molecules. A limit to the usability of the transport method was not observed in the experiments described. At the chosen temperature ranges, the pressure found was represented in the log p, $\frac{1}{T}$ diagram and was compared with the preceding literature data. The entropies of vaporization and sublimation at the melting point of the salt were calculated. (Author)

Ueda, S., Watanabe, A., and Tsuji, F.
THE ADSORPTION BEHAVIOR OF NONIONIC SURFACE-ACTIVE AGENTS CONSIDERED FROM THE STANDPOINT OF THE DIFFERENTIAL DOUBLE LAYER CAPACITY. [1963] 10p.
Order from ATS $16.00 ATS-88Q69J

Trans. of Denki Kagaku (Japan) 1962, v. 30, no. 8, p. 582-586.

DESCRIPTORS: *Adsorption, *Surface-active substances, *Electrical double layer, Electrochemistry.

Vlasov, V. G. and Bessonov, A. F.
OXIDATION OF URANIUM DIOXIDE. 3 Apr 63 [16]p. 32 refs. FTD-TT-63-102.
Order from OTS or SLA $1.60 63-19558

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Tsvetnaya Metallurgiya (USSR) 1962, v. 5, no. 5, p. 113-122.

DESCRIPTORS: Oxidation, *Uranium compounds, *Dioxides, *Reaction kinetics, Heat of activation, Oxygen, Temperature, *Alkali metal compounds, *Carbonates, *Thorium compounds, *Titanium compounds, *Zirconium compounds.

The oxidation kinetics of uranium dioxide with atmospheric oxygen in the range of from 165-800° and air pressures of 2.5-600 mm Hg was investigated. The values of apparent activation energy of the process was calculated at various stages of oxidation. Investigated were the kinetic characteristics of UO_2 oxidation with pure oxygen at a range of from 125 to 330° and p_{O_2} = 100 mm Hg. Phase conversion schemes were introduced during the oxidation of uranium dioxide at various temperature ranges. The effect of additions of alkali metal carbonates and oxides of ThO_2, SrO_2, TiO_2 on the kinetic characteristics of UO_2 oxidation process with air was investigated. An explanation of their effects is given. (Author)

Vol'fkovich, S. I., Berlin, L. B., and Mantsev, B. M.
INVESTIGATION OF EQUILIBRIUM SYSTEMS IN THE PRODUCTION OF AMMONIUM PHOSPHATES. [1963] [27]p. 10 refs.
Order from OTS or SLA $2.60 63-14607

Trans. of [Nauchnyi Institut po Udobreniyam i Insekto-Fungisidam. Trudy] (USSR) 1940, no. 153, p. 228-241.

DESCRIPTORS: *Phosphates, *Ammonium compounds, *Chemical equilibrium, *Fertilizers, Solubility, Phosphoric acid, Impurities, Ammonia, Sulfates, Phase studies, Statistical data.

EARTH SCIENCES

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 225 (EARTH SCIENCES SERIES). 28 June 63, 4p. JPRS: 19926.
Order from OTS $0.50 63-31151

Abstract trans. of Geodeticky a Kartograficky Obzor (Czechoslovakia) 1963, v. 9, no. 5, p. 114-144.

DESCRIPTORS: *Abstracts, *Geophysics, *Czechoslovakia, Computers, Geodesics, Photogrammetry, Numerical methods and procedures, Mining engineering, Maps, Plastics.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 247 (EARTH SCIENCES SERIES). 22 July 63, 6p. JPRS: 20289.
Order from OTS $0.50 63-31349

Abstract trans. of Idojaras (Hungary) 1963, v. 67, no. 1, p. 1-55.

DESCRIPTORS: *Abstracts, *Geophysics, *Hungary, Meteorological parameters, Air mass analysis, Barometric pressure, Snow, Temperature, Temperature sensitive elements, Cyclones, Atmospheric precipitation, Convection, Soil mechanics, Meteorology.

Engelhardt, Wolf v[on] and Lübben, Heino.
STUDY OF THE INFLUENCE OF INTERFACIAL STRESS AND CONTACT ANGLE ON THE DISPLACEMENT OF OIL BY WATER IN POROUS MATERIALS. I. THEORETICAL PRINCIPLES AND PERFORMANCE OF TESTS. [1962] 19p. 15 refs.
Order from SLA $1.60 62-14556

Trans. of Erdöl und Kohle (West Germany) 1957, v. 10, no. 11, p. 747-752.
Another trans. is available from ATS $18.50 as ATS-87L35G [1960] 12p.

DESCRIPTORS: *Porous materials, *Oils, Sources, *Water injection, Stresses, Fluid flow, Theory, Test methods. Tests.

Liu, Tung-sheng and Miao, Fu-en.
THE LOESS OF CHINA [AND] SMALL COAL MINES IN SOUTH CHINA. 2 July 63, 80p. (photos. omitted) 15 refs. JPRS: 20001.
Order from OTS $2.25 63-31191

Trans. of Ti Chih Hsüeh Pao (Chinese People's Republic) 1962, v. 42, no. 1, p. 1-14, 93-101.

DESCRIPTORS: *Soils, *Coal mines, *China, Soil mechanics, Chemical analysis, Economic geology, Structural geology.

Salikhov, A. G.
RAPID METHOD OF CALCULATING THE DEPTH OF OCCURENCE OF RECTANGULAR-PRISM-SHAPED BODIES DISTURBING THE GRAVITATIONAL FIELD. [1963] 13p.
Order from ATS $14.25 ATS-83Q69R

Trans. of Prikl[adnaya] Geofiz[ika] (USSR) 1961, no. 31, p. 230-247.

DESCRIPTORS: *Gravity anomalies, Prismatic bodies, Mathematical analysis.

Climatology and Meteorology

METEOROLOGY AND HYDROLOGY, 1963, NO. 5: SELECTED TRANSLATIONS. 12 July 63, 112p. 117 refs. JPRS: 20146.
Order from OTS $2.50 63-31267

Trans. of Meteorologiya i Gidrologiya (USSR) 1963, no. 5, p. 3-13, 22-27, 29-31, 38-50, 56-59, 61-63.

DESCRIPTORS: *Meteorology, *Hydrology, Airplanes, Buffeting, Atmospheric motion, Clouds, Height finding, Atmospheric sounding, Safety, Flight path, Snow, De-icing materials, Weather forecasting, Cloud height indicators, Antarctic regions, Exploration, Literature, Scientific organizations.

Contents:
Some peculiarities of the airplane buffeting zone at altitudes of 8-10 km, by V. N. Barakhtin
Fluctuations in the height of cloud bases, by M. V. Rubinshtein

Some peculiarities of cumulonimbus cloud formation and flight condition near them, by B. E. Peskov
Determining low safe flight altitude according to vertical atmospheric sounding data, by M. M. Butorin
Expediency of artificial intensification of the melting of snow in the mountains of Central Asia, by V. L. Shul'ts
Experience in refining the forecasting of low cloudiness, poor visibility, and fog, by D. N. Lavrishchev
Principal characteristics and trends in the development of modern instruments for measuring the height of cloud bases, by N. S. Bozhevikov and L. A. Shestopalov
Soviet expeditions to the Antarctic, 1959-61, by A. V. Nudel'man: book review
Literature in meteorology and hydrology during 1962; list of articles published in magazines and books
In the main administration of the hydrometeorological service
In the institutions of the hydrometeorological service.

SOME PROBLEMS CONCERNING EAST ASIA'S MONSOON WINDS. 26 June 63, 244p. 158 refs. JPRS: 19875.
Order from OTS $3.50 63-31124

Trans. of mono. Tung Ya Chi Feng Ti To Kan Wen T'i, Peiping, 1962, 106p.

DESCRIPTORS: *Winds, *Asia, Meteorology, Climatology, *Meteorological phenomena, Rainfall, Atmospheric motion, China.

Topics include: Comments on the viewpoints and methodology of the meteorologists of various countries on the problem of monsoon winds and observations on the problem; investigation on the causes for formation of East Asia's monsoon climate and its characteristics; and, studies of the relationships between the advances and retreats of East Asia's winter and summer monsoons and the seasonal variation of atmospheric circulation and their relationships to the seasons and the life cycle of rainy seasons in China.

Kuang, Pin-hsien.
RELATIONSHIP BETWEEN WINDS AND SURFACE CURRENTS IN THE COASTAL WATERS OF CHINA. 5 July 63, 13p. 9 refs. JPRS: 20031.
Order from OTS $0.50 63-31208

Trans. of mono. Sbornik Dokladov na II Plenume Komissii po Rybokhozyaystvennomu Issledovaniyu Zapadnoi Chasti Tikhogo Okeana (Collection of Reports of the Second Plenary Session of the Commission on Fisheries Research in the Western Pacific Ocean, ed. by P. A. Moiseev) Moscow, 1962, p. 31-40.

DESCRIPTORS: *Marine meteorology, *China, *Ocean currents, *Wind, Meteorology, Oceanology.

Pinus, N. Z.
TROPOPAUSE AND MAXIMUM WIND SPEED LEVEL, tr. by S. J. Netrval. [1963] [10]p. 11 refs. [DSIR] NLL M 3981.
Order from OTS or SLA $1.10 63-19850

Unedited trans. of Met[eorologiya] i Gidro[logiya] (USSR) 1961, no. 3, p. 3-10.

DESCRIPTORS: *Tropopause, *Atmospheric motion, *Wind, Lapse rate, Atmosphere, Flight paths, Meteorology.

Shuleikin, V.
THE ATLANTIC OCEAN AND MODERN GEOPHYSICS. 27 June 63, 7p. JPRS: 1989[illegible]
Order from OTS $0.50 63-31139

Trans. of Nedelya (USSR) 1963, no. 20, 12-18 May, p. 8-9.

DESCRIPTORS: *Marine geophysics, Atlantic Ocean, *Meteorology, *Climatology.

Geography

GEOGRAPHY, 1961, NO. 6: SELECTED ARTICLES. 2 July 63, 32p. 3 refs. JPRS: 20002.
Order from OTS $1.00 63-31192

Trans. of Ti Li (Chinese People's Republic) 1961, no. 6, p. 250, 258-267, 280-281.

DESCRIPTORS: *Geography, Hydrology, Water, *China, *Agriculture, Irrigation systems, Chemical analysis, Sand, Mongolia, Tropical regions, *Deserts, *Scientific research, Soils, Surveying, *Terrain, Soil mechanics, Morphology.

Contents:
The question of utilization of ground water sources for farming irrigation in Tientsin Ts'ang Hsien region from viewpoint of geomorphology, by Liu Tsun-hai
The chemical composition of the natural water in Hsiao T'eng Ko Li sand area in inner Mongolia, by Ch'en Ching-sheng
A discussion on the Quasi-Tropical area in the southern part of Yunnan Province, using the Te Hung Thai and Ching Po Autonomous Chou as an example, by Yang Tsung-kan.

RESEARCH ON SAND CONTROL. 2 July 63, 508p. (figs. omitted). JPRS: 19993.
Order from OTS $7.00 63-31183

Trans. of mono. Chih Sha Yen Chiu, Peiping, 1962, 203p.

DESCRIPTORS: *Sand, Control, *Scientific research, *Deserts, *China, *Geography, Economics, Agriculture, Forestry.

Contents:
Content in brief
From the editors
The natural characteristics and the melioration of the southwestern section of the Taklamakan Desert of Sinkiang, by Chu Chen-jen and others
A survey of the desert of the middle reaches of the Tarim River, Sinkiang, by Chang Hsüeh-chung and others
Natural appearance of the desert region of the eastern part of the Tarim Basin, Sinkiang, by Ch'en Yung-tsung and others
A survey of the desert of Chun Ko Erh [Dzungarian]

Basin, Sinkiang, by Hu Shih-chih and others
A survey of the desert of Ch'ai Ta Mu, Tsinghai, by Yang Jen-chang and others
A preliminary discussion on the types of Gobi in the northwestern part of Hc Hsi Tsou Lang and its reclamation and utilization, by Chao Sung-ch'iao
The origin of the desert between Min Ch'in and Pa Tan Chi Lin Temple, Kansu, and the problems of its reclamation and utilization, by Lou T'ung-mou
A survey of the Gobi of Western Inner Mongolia and Pa Tan Chi Lin Desert, by Yu Shou-chung and others
A survey of the desert of the eastern part of T'eng Ko Li, Inner Mongolia, by Huang Yin-hsiao and others
A survey of the desert of the western section of the United Middle and North Wu La T'e Banner of Inner Mongolia, by Ma Tsai-t'ao and others
A survey of the K'u Pu Ch'i Desert Inner Mongolia, by Li Po and others
A survey of the Desert of Hsiao T'eng Ko Li, Inner Mongolia, by Yang Shu-k'uan and others
A survey of the desert in Ho Tung, Ninghsia, by Li Hsiao-fang
The basic conditions of the desert region of the southern part of I-K'o Chao League, Inner Mongolia; along the Great Wall in Northern Shensi, by Lei Ming-te and others
Reclamation and utilization of the lake basins in the deserts, by Hu K'o-ch'in and others.

Yang, Ming-te and Chang, Ching-hua.
LANDSCAPE CHARACTERISTICS OF SOUTHERN KWEICHOW AND SOME PROBLEMS OF DEMARCATION OF NATURAL DISTRICTS [AND] HOW TO TEACH PROVINCIAL GEOGRAPHY OF CHINA.
10 July 63, 31p. JPRS: 20119.
Order from OTS $1.00 63-31257

Trans. of Ti Li (Chinese People's Republic) 1962, no. 4, p. 135-139, 148, 157-160.

DESCRIPTORS: *Geography, *Education, *China, Terrain.

Geology

GEOLOGICAL GAZETTEER OF THE CH'I LIEN MOUNTAINS. VOL. I: TRAIL GEOLOGY. 17 June 63, 652p. 166 refs. JPRS: 19702.
Order from OTS $7.50 63-31048

Trans. of mono. Ch'i Lien Shan Ti-Chih Chih, v. 1, Peiping, 1960, 320p.

DESCRIPTORS: *Geological survey, *Mountains, *China, Stratigraphy, Paleontology, Petrology, Structural geology, Economic geology, Minerals, Distribution.

An introduction is given to the history of geological studies of the Ch'i-lien Mountains and the geological conditions of 15 trails of the Ch'i-lien Mountains are described. The description is done on the basis of dividing each trail into various structural and lithological areas. The book provides definite information of the geological survey and over-all inspection of the Ch'i-lien Mountain region.

GEOLOGICAL GAZETTER OF THE CH'I LIEN MOUNTAINS. VOL. IV. BK. I: PALEONTOLOGICAL DESCRIPTION OF THE CH'I-LIEN MOUNTAINS.
26 June 63, 470p. 236 refs. JPRS: 19877.
Order from OTS $6.00 63-31120

Trans. of mono. Ch'i Lien Shan Ti Chih Chih, v. 4, bk. 1, Peiping, 1960, 162p.

DESCRIPTORS: *Geological survey, *Mountains, *China, *Paleontology.

Ten articles are included covering systematically the Paleozoic and Mesozoic animals and plants of the Ch'i-lien Mountain region. Its information is based upon the numerous fossil samples collected from that region in the 1956-1958 Ch'i-lien Mountain Project of the Ch'i-lien Mountains Geological Survey Groups organized by the Academia Sinica and other related units. These samples have been carefully studied in the laboratories, and the resultant information arranged and edited to become this book. These ten articles include four in paleobotany, one on Family Fusulina, four on Class Trilobita, and one on Class Ostracoda. (Author)

Baar, A.
CAUSES AND MECHANICS OF EARTHSTROKES AND OTHER EARTH-PRESSURE EFFECTS IN MIDDLE-GERMANY POTASH-MINES. [1963] 22p. (figs. omitted) 12 refs.
Order from SLA $2.60 63-16264

Trans. of Bergbautechnik (East Germany) 1954, v. 4, no. 3, p. 132-139.

DESCRIPTORS: *Mining engineering, *Potassium compounds, *Shock (Mechanics), Earth, Pressure, Rock (Geology), Rupture, Deformation, Geology.

Belyaevskii, N. A. and Fedynskii, V. V.
DEEP DRILLING AS A METHOD OF STUDYING THE EARTH'S CRUST. 26 June 63, 8p. JPRS: 19887.
Order from OTS $0.50 63-31134

Trans. of #Akademiya Nauk SSSR. Izvestiya. Seriya Geologicheskaya, 1963 [v. 28] no. 5, p. 3-8.

DESCRIPTORS: *Well drilling, *Lithosphere, Scientific research, Stratigraphy, Structural geology, *Geology.

Chetverikov, L. I.
PRINCIPLES OF APPLICATION OF THE THEORY OF PROBABILITY TO THE ANALYSIS OF EXPLORATION DATA. [1963] 12p.
Order from ATS $18.75 ATS-03Q70R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Geol[ogiya] i Razvedka (USSR) 1962, v. 5, no. 9, p. 73-85.

DESCRIPTORS: *Probability, Theory, *Exploration, Data, Mathematical analysis.

Chetverikova, N. P.
THE ORDOVICIAN AND SILURIAN DEPOSITS OF THE WESTERN PART OF CENTRAL KAZAHSTAN, PT. I (Ordovikskie i Siluriiskie Otlozheniya Zapadnoi Chasti Tsentral'nogo Kazakhstana) tr. by Ivan Mittin. 1962, 42p. Geological Survey no. 97 (1-2).
Order from OTS or SLA $4.60 63-19586

Trans. of Materialy po Geologii Tsentral'nogo Kazakhstana (USSR) 1960, v. 1, p. 9-26.

DESCRIPTORS: *Stratigraphy, Geological age determination, Sedimentary rock, Igneous rock, Paleontology, Structural geology, Geology.

Contents:
Introduction
History of the study of the lower paleozoic deposits
Brief information on the geological structure and stratigraphy of the pre-ordovician rocks.

Gonzales Reyna, Jenaro.
NATURAL RESOURCES OF MEXICO: MINERAL RESOURCES OF MEXICO. [1963] [30]p.
Order from SLA $2.60 63-16181

Trans. of Sociedad Mexicana de Geografia y Estadistica. Boletin, 1949, v. 68, July/Oct, p. 19-44.

DESCRIPTORS: *Minerals, *Mexico, *Economic geology, Industries, *Mining engineering, History, Geological survey, Geology.

Karavaiko, G. I., Ivanov, M. V., and Pomerants, L. B.
MICROBIOLOGICAL INVESTIGATIONS OF A KARA KUM SULFUR DEPOSIT. 3 July 63, 15p. 15 refs.
JPRS: 20027.
Order from OTS $0.50 63-31206

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1963 [v. 28] no. 2, p. 249-260.

DESCRIPTORS: *Sulfur, Deposits, Geochemistry, *Microorganisms, Analysis, *Economic geology, Deserts.

Microbiological studies made in the Kara Kum sulfur hills show that the initial process in the formation of elemental sulfur deposits was a process of microbiological reduction of the sulfates. The great part played by T. thiooxidans in oxidation of sulfur to sulfuric acid was established in the Kara Kum sulfur hills. Particularly vigorous sulfur oxidation processes occur in the lower, moistened parts of the hills, where the number of T. thiooxidans reaches 10,000-100,000 cells per gram of ore. Migration of aluminum and iron is observed with decomposition of the bedrock by sulfuric acid and precipitation of them when they enter the rock of the center section or fringe rock with a neutral pH. (Author)

Lombard, Jean.
NOTES ON THE PREPARATORY PHASE OF MINERAL EXPLORATION, III - V. [1963] 17p. (refs. omitted).
Order from SLA $1.60 63-16215

Trans. of Chronique des Mines et Recherche Minière (France) 1961, v. 23, no. 297, p. 9-14.

DESCRIPTORS: *Minerals, *Structural geology, Africa, Geological survey, Data, Documentation, Analysis, *Economic geology, Exploration, Geology.

Contents:
Comparison with adjacent mineralized regions having similar geological structure
Documentation collected previously
The decision.

Lozano Garcia, Raul.
ANNALS OF THE INSTITUTE OF GEOLOGY [OF THE] NATIONAL UNIVERSITY OF MEXICO. [1963] [90]p. (figs. omitted).
Order from SLA $8.10 63-16182

Trans. of [Universidad Naciona], Mexico, D. F. Instituto de Geologia. Anales] 1951, v. 10.

DESCRIPTORS: *Economic geology, *Mexico, *Nitrates, Deposits, *Quartz, Sand, *Pearlite, Geological survey, Geology.

Contents:
Economic geology of the San Vicente and San Marcos valleys in the state of Coahuila
Nitrate deposits at Mezquitic in the state of Jalisco
Preliminary report on the deposits of quartz-bearing sands at Tarandacuao and neighboring areas in the state of Guanajuato, Mexico
The perlite deposit in the state of Hidalgo.

Spackeler, G.
POTASH- AND ROCKSALT-MINING IN THE PAPERS TO THE INTERNATION EARTH-PRESSURE CONVENTION IN LEIPZIG. [1963] 30p. (figs. omitted) 14 refs.
Order from SLA $2.60 63-16265

Trans. from Bergbautechnik (East Germany) 1960, v. 10, no. 1.

DESCRIPTORS: *Mining engineering, *Potassium compounds, *Carbonates, *Rock salt, Earth, Pressure, *Conferences, Germany.

Of the 24 papers to the International Earth-pressure Convention, Leipzig, 1958, there are abstracted 7 which are of particular importance to salt mining. Discussed especially thoroughly are the papers of Höfer and of Kvapil, which report on measurements in salt mines and experiments on salt rock in the laboratory, and which make new contributions to the question of the stability of our salt solids. Both authors stress the influence of the factor of time. The paper of Avershin deals with the tension distribution, in, above and below ore- and salt-solids. Buchheim was able on the basis of geophysical measurements (ultrasound) to present documentation for ascertaining the tension distribution in the salt solids, while Watznauer documented very impressively the general question of the existence of so-called tectontic residual-tension and their origin. The paper of Tincelin and Sinou from the Lorraine iron-ore mining was included in the remarks because it deals mainly with chamber-pillar mining, which enables conclusions for salt mining, and especially because it discussed problems with which the salt miner has hitherto occupied himself with only little. Finally, in a closing paper, Spackeler attempted

to reduce to a common denominator the various controversial questions discussed at the Convention, especially the remarks of the coal- and salt-miners, for warning against uncritical extension of the research results of other mining branches to salt earth. (Author)

Toron, Luis.
NATURAL RESOURCES OF MEXICO: THE RAW MATERIALS FOR THE IRON AND STEEL INDUSTRY. [1963] [20]p.
Order from SLA $1.60 63-16178

Trans. of Sociedad Mexicana de Geografia y Estadistica. Boletin, 1949, v. 68, July/Oct, p. 45-62.

DESCRIPTORS: *Ores (Metal Sources), Deposits, Iron, Steel, *Mexico, Coal, *Economic geology, Geology.

Villafaña, Andres.
THE MINING AND METALLURIGICAL INDUSTRY IN MEXICO. [1963] [11]p. (tables omitted).
Order from SLA $1.60 63-16179

Trans. of Boletin de Minas y Petroleo (Mexico) 1945, v. 16 [no. 1] p. 8-14.

DESCRIPTORS: *Economic geology, *Minerals, *Metals, Mining engineering, Industries, History, *Mexico, Geology.

Wittich, Ernesto.
OBSERVATION ON BARITE IN MEXICO. [1963] [12]p. 26 refs.
Order from SLA $1.60 63-16180

Trans. of Boletin Minero (Mexico) 1922, v. 13, no. 3, p. 312-318.

DESCRIPTORS: *Barium compounds, *Sulfates, *Mexico, Deposits, Petrology, *Economic geology, Geology.

Mineralogy

Baron, Guy.
SYNTHESIS OF DOLOMITE: APPLICATION TO THE PHENOMENON OF DOLOMITIZATION. [1963] 109p. 44 refs.
Order from SLA $9.10 63-16545

Trans. of Revue de l'Institut Français du Pétrole [et Annales des Combustibles Liquides] 1960, v. 15, no. 1, p. 3-68.

DESCRIPTORS: *Dolomite, Calcite, Geochemistry, Crystal structure, Solubility, Synthesis (Chemistry), Chemical precipitation, Petrology, Economic geology.

Contents:
The geological problem of the genesis of the dolomite rocks.
Difficulties encountered in the study of this synthesis
The crystallographic nature of the problem
Literature about experiments to synthesize dolomite
Selection of a physico- chemical mechanism
Synthesis of a dolomite by direct precipitation
Synthesis of a "secondary dolomite ".
Experimental dolomitization of calcite
Physico- Chemical consequences
Mineralogical consequences
Petrogenetic consequences

Goni, J. C.
NEW METHOD OF DIFFERENIATION BETWEEN CALCITE AND DOLOMITE. [1963] 4p. (refs. omitted).
Order from SLA $1.10 63-16241

Trans. of Soc[iété] Franç[aise de] Miné[alogie et de] Crist[allographie]. Bull[etin] 1960, v. 83, p. 254-256.

DESCRIPTORS: *Dolomite, *Calcite, Identification, Fluorescence, Uranium compounds, Salts, Ammonium compounds, Phosphates.

A new method of differentiation between calcite and dolomite is described on the basis of the fact that calcite acquires a bright fluorescence, when it is attacked by a solution of uranium salts, after having been treated with a solution of ammonium phosphate. This method is then compared with the silver chromate method. (Author)

Krüger, Peter.
SEDIMENTARY FLOURITE: A SOURCE OF DANGER TO THE DOLOMITE INDUSTRY WHICH HAS BEEN OVERLOOKED UNTIL NOW. [1963] 5p. 5 refs.
Order from SLA $1.10 63-16551

Trans. of Zeitschrift für Angewandte Geologie (East Germany) 1962, v. 8, p. 400-401.

DESCRIPTORS: *Fluorspar, *Dolomites, Separation, Petrology, Geochemistry, *Economic geology.

Topics include: Petrography of sheet dolomite from Caaschwitz; occurrence of sedimentary flourite; genesis of flourite; and, the industrial importance of sedimentary flourite.

Seidl, Kurt.
THE FORMING OF BITUMEN BY DOLOMITIZATION OF LIMESTONE UNDER THE INFLUENCE OF BRINE (Uber die Bildung von Bitumen dei der Dolomitisierung von Kalkgestein unter der Einwirkung von Salzsolen). [1962] [16]p. 9 refs.
Order from SLA $1.60 62-16639

Trans. of Neues Jahrbuch für Mineralogie. Monatshefte (West Germany) 1959, Apr, p. 85-92.

DESCRIPTORS: Minerals, *Dolomite, *Bitumens, *Limestone, *Ore (Metal sources), Deposits, Salinity.

Only the recognition, that, under the influence of brine, a part of the organic substance of the dolomitized limestone is saved from destruction and changed into bitumen which goes into reaction with the components of the limestone, brine and ore solutions, explains the causal relationship between dolomitization and ore formation as parts of a complex process. (Author)

Wegscheider, Rudolf and Mehl, J.
THE SYSTEM SODIUM CARBONATE-SODIUM BICARBONATE-WATER AND THE REGION OF EXISTENCE OF TRONA. 19 Feb 59 33p. (figs. tables omitted) 30 refs.
Order from SLA $3.60 63-14101

Trans. of Monatshefte [für Chemie] (Austria) 1928, v. 49, p. 283-315.

DESCRIPTORS: *Sodium compounds, *Carbonates, *Bicarbonates, Water, Phase studies, Minerals.

The equilibriums between aqueous solutions of Na_2CO_3 and $NaHCO_3$ and the solid substances separating out of them was studied at eleven temperatures between 20° and 94.5° without NaCl and at three temperatures with Nacl added. At 90° one or two double salts occur, which are righer in CO_2 than trona. Trona gives, upon decomposition by water, an unstable sodium carbonate.

Oceanography

Belousov, I., Golovanov, Ya., and Doil'nitsin, P.
COMMENTS ON OCEANOGRAPHICAL RESEARCH: GIVE WAY, OCEAN (Rasstupis' Okean). 10 June 63, 14p. JPRS: 19624.
Order from OTS $0.50 63-31018

Trans. of Znanie-Sila (USSR) 1963 [v. 38] no. 3, p. 46-49.

DESCRIPTORS: *Oceanographic vessels, Submarines, *Oceanology, Oceanographic equipment, Underwater equipment, Design, Operation.

A discussion of the scientific and economic implications of deep-sea craft which includes details of a proposed Soviet bathyscaphe-type device.

Kaplin, Pavel Alekseevich.
STRUCTURE OF THE OCEAN BOTTOM [AND] UNDERWATER STUDIES OF CANYONS. 27 June 63, 15p. JPRS: 19908.
Order from OTS $0.50 63-31170

Trans. of [Vsesoyuznoe Obshchestvo po Rasprostraneniyu Politicheskikh i Nauchnykh Znanii]. Seriya 12 (USSR) 1963 [no. 9] p. 7-16, 37-42.

DESCRIPTORS: *Ocean bottom topography, *Marine geology, *Oceanology.

Krokhin, E. M.
INVESTIGATIONS OF THE ABUNDANCE OF SAPROPHYTIC BACTERIA IN LAKE DALNEE (Issledovanie Kolichestva Saprofitnykh Bakterii v Dalnem Ozere) tr. by R. E. Foerster. 1962 [5]p. 6 refs. FRBC Trans. Series no. 419.
Order from NRCC NRCC C-4443

Trans. of Mikrobiologiya (USSR) 1954, v. 23, no. 1, p. 49-52.

DESCRIPTORS: *Bacteria, *Lakes, Phosphates, Nitrogen compounds, Salmonidae, Decomposition.

ENGINEERING

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 245 (ELECTRONICS, ENGINEERING, AND SPACE RESEARCH SERIES). 19 July 63, 24p. JPRS: 20250.
Order from OTS $0.75 63-31329

Consists of abstracts of articles from selected scientific and technical journals of East Germany and Hungary.

DESCRIPTORS: *Abstracts, *Electronics, *Engineering, Space flight, Bibliographies, Measuring devices (Electrical and Electronic), Telephone communication systems, Telephone equipment, Pulse counters, Quartz capacitors, Silicon, Single crystals, Integral transforms, Circuits, Magnetic recording systems, Reports, Masers, Radio interference, Transformers, Microwaves, Millimeter waves, Timing circuits, Amplifiers, Radio astronomy, Filters (Electromagnetic wave), Klystrons, Waveguides, Ferrites, Mixers,(Electronic), Traveling-wave tubes, Measure theory, Discriminators, Noise generators.

THE FUTURE OF AVIATION. 7 Mar 63 [5]p. FTD-TT-63-156; AD-299 622.
Order from OTS or SLA $1.10 63-19434

Unedited rough draft trans. from Izvestiya (USSR) 1963, 12 Jan, p. 4.

DESCRIPTORS: *Aeronautics, *Aircraft, Design, Operation, Reliability, *Hypersonic planes.

Four questions are answered by General Designer Artem Ivanovich Mikoyan: Is there a limit to the height and speed of aircraft flight? What is a hypersonic airplane? What "obstacles" like the "sound barrier" may be encountered in the further course of the development of aviation? What will determine the duration of an aircraft flight? (Author)

Polyakov, E. A.
THE THEORY OF TRANSMISSION WITHOUT WIRES OF ELECTRICAL SIGNALS FROM THE BOTTOM OF THE HOLE TO THE SURFACE DURING DRILLING. [1963] 11p.
Order from ATS $16.25 ATS-51Q68R

Trans. of Prikl[adnaya] Geofiz[ika] (USSR) 1962, no. 32, p. 142-154.

DESCRIPTORS: *Well drilling, Surfaces, Boreholes, *Communication systems, Electrical equipment, Signals, Transmission, Theory, *Well logging,

Uzumov, I. G.
DETERMINATION OF THE LOAD ON SURFACE EQUIPMENT DURING THE WORKING CYCLE OF A DOWNHOLE PUMP. [1963] 7p.
Order from ATS $10.25 ATS-95Q67R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Neft' i Gaz (USSR) 1962, v. 5, no. 10, p. 35-40.

DESCRIPTORS: *Pumps, Operation, Petroleum, Machines, Load distribution.

Vovk, A. A.
METHODS OF DETONATING CHARGES. 3 July 63, 19p. JPRS: 20026.
Order from OTS $0.50 63-31205

Trans. of mono. Vzryznik (Blasting) Kiev, 1962, p. 94-117.

DESCRIPTORS: *Charges (Explosive), *Detonators, Blast, *Mining engineering.

Chemical Engineering

THE POSSIBILITY OF OBTAINING CALCIUM FROM CALCIUM CHLORIDE AND SODIUM. 8 Nov 48, 9p. 2 refs.
Order fromOTS or SLA $1.10 63-10970

Trans. from unidentified German mono. pub. by Deutsche Gold- und Silberscheideanstalt, A.G., Frankfurt a.M., n.d. (PB-74417C).

DESCRIPTORS: *Calcium, Production, Calcium compounds, Chlorides, *Sodium, Electrolysis, *Electrolytic cells, Design, Operation.

A presentation is made of theoretical and practical information of significance for the operation of an electrolytic cell for the preparation of calcium. With reference to the Knapsack sodium fusion electrolysis, a critical examination is made of the suitability of the Downs crucible for the calcium electrolysis. In order to obtain valid indications of the possibilities of a calcium electrolysis, experimental investigations on the pilot plant scale are necessary. (Author)

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 85. 28 June 63, 6p. JPRS: 19930.
Order from OTS $0.50 63-31155

Trans. of 22 selected short articles from Mar-June 1963 issues of 14 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Economics, *Plastics industry, Construction, *Fertilizers, *Shale, *Petroleum, *Tires, Maintenance, *Chromium compounds, Oxides, Dyes, *Diamonds, *Synthetic stones, *Paper, *Construction materials industry.

Contents:
Revision of 1963 capital investment plan
Construction and expansion in the plastics industry
New fertilizer plants; shale research
Additional petrochemical facilities, tire repair shops
Chrome compounds, dyes, synthetic diamonds, roofing paper enterprises.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 86. 1 July 63, 57p. JPRS: 19967. Order from OTS $1.50 63-31173

Trans. of Gidroliznaya i Lesokhimicheskaya Promyshlennost' (USSR) 1963 [v. 16] no. 3, p. 1-3; and 16 selected articles from Mar-May 63 issues of 9 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Synthetic rubber, *Tires, *Fibers (Synthetic), *Plastics, Industrial plants, *Construction, *Drugs, Fertilizers, Sulfuric acid, Asbestos, Nitrogen, *Polyethylene plastics, Polymers, Silicon, Moistureproofing, Costs, Economics, *Education, Engineering personnel, Economists, Plastics industry, Labor, *Automation, *Wood pulp.

Contents:
Synthetic rubber manufacture simplified at Sterlitamak plant
A new tire-recapping plant at Osh
Synthetic fiber production at Barnaul
Plastics production at Kuskovskii chemical plant
Construction projects of large-scale chemical industry
News of the drug manufacturing industry
News of the Moscow chemical industry
A new chemical plant at Volzhskii, by P. Godlevskii
Nitrogen fertilizer production at Rustavi, by A. Krichevskii
Polyethylene production in the Kazakh SSR, by I. Lapan
Water-repellent silicon production to start at Dankov, by N. Yakovchuk
Silicone prices are reduced
Novo-Moskovsk chemical leads the way toward economy of production
Further education of engineers and economists is needed, by A. Vain
Rybinsk plant converts to plastics production, I. Bersenev
Achievements of the Moscow Kauchuk plant
Hydrolytic and wood-pulp chemistry helps develop the large-scale chemical industry.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 87. 1 July 63, 11p. JPRS: 19971. Order from OTS $0.50 63-31177

Trans. from Molod' Ukrainy (USSR) 1963, 24 Apr, p. 2; 7 May, p. 1; 18 May, p. 3.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Carbon black, *Plastics, Industrial plants, Costs, *Metals, Iron, Steel.

Contents:
Dashava carbon black plant production in excess to plan
Chemical industry of the Ukraine increases production
The use of plastics by plants of the Ukraine may yield substantial savings of ferrous and nonferrous metals, by M. Onyshchenko.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 89. 5 July 63, 56p. JPRS: 20042. Order from OTS $1.50 63-31216

Trans. of N[auchno]-T[ekhnicheskie] O[bshchestva] (USSR) 1963 [v. 5] no. 4, p. 17-18, 29-32, and 18 selected articles from 1963 issues of 12 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, Construction, *Coke, *Varnishes, Paints, *Tires, *Plastics, Management engineering, Industrial plants, Labor, Fatigue (Physiology), Maleic anhydride, Furaldehyes, *Polyethylene plastics, Polymers, Plastics industry, Scientific research, *Furan, *Petroleum, Refineries, Mining engineering, Steam, Water, Ammonia.

Contents:
Construction of enterprises of large-scale chemical industry
Progress at the Bagleiskii Byproduct Coke Oven Plant, by S. Akhmatov
Riga lacquer and paint plant exceeds, design capacity, by P. N. Zhmud'
Completion of the Dnepropetrovskii tire shop
Plastics production problems in the Azerbaidzhan SSR, by V. Velieev and others
Lagging production at Dorogomilovskii chemical plant, by G. Matetskii
News of large-scale chemical industry construction in Armenia, by V. Khachikyan
Poor production at the Krasnoyarsk tire plant, by P. Novokshonov
New method for producing maleic anhydride from furfurol
Production of polyethylene by the high-pressure method
Preparing the Rustavi caprolactam plant for operation
Dorogomilovskii chemical plant to produce plastics
Mass production of high-strength tires at the Yaroslavl' tire plant
News of public scientific research institutes, by K. Naidin
Lagging production of furane polymers, by N. Oster-Volkov
Progressive production at the Novokuibishev petroleum refinery, by P. Uzunkoyan
Contradictory production plans at the "Karatau" combine, by K. Maksimovich
Lagging supply of steam and industrial water at the Rustavi caprolactam plant
High output of ammonia at the Chirchik electrochemical combine, by G. Yastrebov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 90. 8 July 63, 8p. JPRS: 20055. Order from OTS $0.50 63-31223

Trans. of 6 selected short articles and news items from May-June 63 issues of 21 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Plastics industry, *Artificial leather, *Fibers (Synthetic), *Tires, Maintenance, *Paints, Pigments, Varnishes, Industrial plants, Synthetic rubber, *Chromium compounds, Oxides, *Copper, *Sulfuric acid, Agriculture, Sodium compounds, Phenols, Acetones.

Contents:
Plastics and artificial leather industries
Chemical fibers industry
Tire repair and synthetic rubber enterprises
Paint, pigment, and varnish plants
Chrome compounds, copper chemicals, sulfuric acid, agricultural chemicals
Souvenirs, sodium sulfide, phenol-acetone; other chemical industry developments.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 91. 8 July 63, 47p. JPRS: 20059.
Order from OTS $1.25 63-31225

Trans. of 15 selected articles from 1963 issues of 12 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Polyethylene plastics, Polymers, Industrial plants, *Fibers (Synthetic), *Fertilizers, *Phosphates, *Agriculture, *Labor, *Construction, *Machines, *Fuels, Petroleum, Natural gas, Industrial equipment, Scheduling, *Tires

Contents:
Delay in completing the Caprolactam production shop at Rustavi, by B. Mshvenieradze and others
Polyethylene production is started at the Salavat petrochemical combine
The future of the chemical industry in the Armenian SSR
Recent performance of the Kuskovskii chemical plant, by P. Khursik
Improving the quality of caprone at the Chernigov synthetic fiber plant, by S. Prodan
Shortcomings at the Vinnitsa superphosphate plant, by Yu. Shevtsov
New crop protectants in Latvia, by E. Silina
A labor-saving suggestion at the Klin synthetic fiber combine, by I. Puzrin and V. Rodionov
Shortcomings at the Dneprodzerzhinsk nitrogenous fertilizers plant, by S. Akhmatov
Making synthetic fiber machinery in Kiev, by A. Lysenko
The chemical industry of Tadzhikistan, by Yu. Valibekov
Improve the deliveries of equipment to chemical plants, by V. Gogin and P. Novikov
Plants for increased production of synthetic fibers in the Ukrainian SSR, by M. Baibakov
Expansion of the Cherkassi artificial fiber plant
New tire production facilities at the Dnepropetrovsk tire plant.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 92. 10 July 63, 44p. JPRS: 20112.
Order from OTS $1.25 63-31253

Trans. of na Stroikakh Rossii (USSR) 1963, no. 4, inside front cover, p. 1, 2 (excerpt), 7; and from Ekonomicheskaya Gazeta (USSR) 1963, no. 14[87] p. 5; [no. 15 (88)] p. 3-4; Pravda, Moscow (USSR) 1963, 4 Apr, p. 2; 7 Apr, p. 2; 13 Apr, p. 4; Trud, Moscow (USSR) 1963, 1 Apr, p. 2

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Industrial plants, Construction, Polyethylene plastics, *Plastics, Sulfur, Plastic pipes, Supplies, Agriculture, Plastic films, Fertilizers, *Economics.

Contents:
A large polyethylene plant completed
Progress in construction of the Nizhnii Tagil plastics plant, by V. Gurin
Inter-departmental dispute holds up funds for expansion of a sulfur mining and processing enterprise, by I. Ivanikov
Development of plastics production slowed down by lagging petrochemicals plant construction, by V. Klimenko
Indifference at sovnarkhoz delays production of plastic pipe, by B. Zolotov
Irregular raw material supplies prevent attainment of profitable production, by L. Shmelev
Party meeting reviews progress in the development of Central Asia's chemical industry and agriculture
Past planning errors partly responsible for inadequate plastic film production capacity, by M. Garbar and A. Barkov
Poor organization of construction work and equipment deliveries blamed for delayed start-up of chemical plants, by A. Kuaryavtsev
Production of chemicals from by-products hindered by lack of funds and research facilities, by A. Maklov and V. Kapital'nyi
Poor organization and delays in construction equipment supplies are slowing down the construction of a nitrogenous fertilizer plant near Grodno, by V. Knyp
Progress in construction of a large chemical combine at Volgograd. by Selyunin
Status of chemical plant construction in RSFSR.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL MACHINE BUILDING NO. 26. 11 July 63, 31p. JPRS: 20130.
Order from OTS $1.00 63-31262

Trans. of 10 selected articles from Feb-June 63 issues of 9 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical engineering, *Machines, *Coatings, Corrosion inhibition, *Plastics, *Reciprocating pumps, Valves, Industrial plants, Machine tool industry.

Contents:
Greater unity in technical innovations, by V. Meleshchenko
Fill the chemists' orders ahead of schedule, by P. Molchanov
Fill the chemical industry's orders ahead of schedule, by G. Mikhailik
Slow pace in reconstruction an important Fastov plant, by I. Doronin and A. Karasiichuk
New metals and chemical machines
Steel is inferior to caprone, by E. Rustamov
The latest machinery for heavy chemistry
Correspondence between cement plant and machine-building plant on production delays, by N. Boiko
More paper work than production at the Krivoi Rog cement plant, by A. Stetsenko
The failure to fill the chemical industry's orders.

David, Jules.
PROCESS AND APPARATUS FOR HYDROGENATING LIQUID SUBSTANCES OR THOSE CONVERTED INTO LIQUID CONDITION, AND, IN PARTICULAR, UNSATURATED OILS AND FATS, AND CONVERTING THEM VERY RAPIDLY INTO SATURATED HARD PRODUCTS. [1963] 8p.
Order from OTS or SLA $1.10 63-14936

Trans. of French patent 470,392, cl. 14, sub. 4, filed 14 June 13, delivered 15 June 14, pub. 8 Sep 14.

DESCRIPTORS: *Hydrogenation, Liquids, *Oils, Vegetable oils, *Fats, Soaps, Stearates.

Furukawa, Masahide.
A METHOD FOR THE CONTINUOUS OXIDATION OF CYCLOHEXANE. July 63, 7p. (figs. omitted).
Order from SA $16.00 SA Code-P-151

Trans. of published Japanese patent 5669/1959, cl. 16-c-8, appl. no. 24292/1956 filed 21 Sep 56, pub. 30 June 59, by Kanto-Denka-Kogyo Co.

DESCRIPTORS: *Cyclohexanes, Oxidation, *Cyclohexanols, *Cyclohexanones, Production, Oxygen, Gas flow, Cobalt catalysts, *Towers (Chemistry), Design.

Gorlovskii, I. A., Aizenberg, E. S. and others.
THE TECHNOLOGY OF ULTRAMARINE MANUFACTURE. [1962] 10p.
Order from ATS $14.25 ATS-95P61R

Trans. of Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1961, no. 3, p. 20-25.
Another trans. is available from TTIS $21.00 as TTIS-4015, Sep 62, 1700 words.

DESCRIPTORS: *Pigments, *Bleaching agents, Production.

Haken, Wilhelm v[on].
SODA, CAUSTIC SODA AND CHLORINE (A PRODUCTION AND MARKET ANALYSIS). I. WORLD PRODUCTION IN PAST AND PRESENT. [1963] 10p.
Order from SLA $1.10 63-14241

Trans. of Chemische Industrie (West Germany) 1953, v. 5, no. 2, p. 66-68.

DESCRIPTORS: *Chemical industry, *Sodium compounds, Oxides, Hydroxides, *Chlorine, Industrial production, Electrolysis, *Economics.

Haken, Wilhelm von.
SODA, CAUSTIC SODA AND CHLORINE (A PRODUCTION AND MARKET ANALYSIS). II. GERMANY AND WESTERN EUROPE. [1963] 25p. 1 ref.
Order from SLA $2.60 63-14240

Trans. of Chem[ische] Ind[ustrie] (West Germany) 1953, v. 5, no. 3, p. 125-131.

DESCRIPTORS: *Chemical industry, Europe, Germany, *Sodium compounds, Oxides, Hydroxides, *Chlorine, Industrial production, *Economics.

(See also 63-14241)

Haken, Wilhelm von.
SODA, CAUSTIC SODA AND CHLORINE (A PRODUCTION AND MARKET ANALYSIS). III. EASTERN EUROPE AND OVERSEAS. [1963] 28p. 2 refs.
Order from SLA $2.60 63-14242

Trans. of Chem[ische] Ind[ustrie] (West Germany) 1953, v. 5, no. 5, p. 385-392.

DESCRIPTORS: *Chemical industry, Europe, *Sodium compounds, Oxides, Hydroxides, *Chlorine, Industrial production, *Economics.

(See also 63-14240)

Kazanskii, B. A., Liberman, A. L. and others.
RELATIVE EFFICIENCIES OF LABORATORY FRACTIONATING OF VARIOUS CONSTRUCTIONS. [1963] 23p. 25 refs.
Order from OTS or SLA $2.60 63-16037

Trans. of Zhurnal Obshchei Khimii (USSR) 1942, v. 12, p. 112-122.
Another trans. is available from OTS or SLA $1.10 as 61-16657 [1961] 10p. and an abstract trans. $1.60 in 61-20323 [1961] 18p.

DESCRIPTORS: *Towers (Chemistry), *Distilling plants, Construction, Design, Effectiveness, *Fractionation.

For abstract see Technical Translations 6: 417, 1961.

Kobayashi, Masao and Ishida, Seiichi.
A PROCESS FOR THE PRODUCTION OF $LiAlH_4$. July 63, 8p. 1 ref.
Order from SA $16.00 SA Code-P-152

Trans. of published Japanese patent 11802/1962, cl. 15-K-2, appl. no. 6305/1960 filed 27 Feb 60, pub. 23 Aug 62, by Ryutaro Tsuchida.

DESCRIPTORS: *Catalysts, Production, *Lithium compounds, *Aluminum compounds, Hydrides, Chlorides, *Grinders, *Ball mills, Design.

Krevelen, D. W. van and Hooren, C. J. van.
A STUDY OF THE PHYSICAL ABSORPTION OF GASES AND OF OPERATING PACKED TOWERS. [1963] 5p.
Order from SLA $1.10 63-14141

Trans. of mono. Congres Internationaux de Chimie Industrielle (no. 21) Brussels, 1948. Comptes Rendus, p. 166-167.

DESCRIPTORS: *Towers (Chemistry), *Mass transfer, Gases, Absorption, Theory.

An abstract of the theory of the physical absorption of gases is given based on some simple fundamental principles and a study of the factors determining the transfer surface between gases and liquids in packed towers. (Author)

Kronacher, H. and Höger, H.
ARRANGEMENT FOR PREHEATING AMMONIA IN THE SYNTHESIS OF HYDROCYANIC ACID FROM AMMONIA AND, FOR EXAMPLE, CARBON MONOXIDE. [11 Dec 62] 3p. 1 ref.
Order from OTS or SLA $1.10 63-16398

Trans. of German patent 953,068, appl. made public 24 May 56, filed 30 Mar 54, grant made public 8 Nov 56, issued 29 Nov 56, by Süddeutsche Kalkstickstoffwerke A.-G.

DESCRIPTORS: *Hydrocyanic acids, Synthesis (Chemistry), Carbon compounds, Monoxides, *Ammonia Heating, *Heaters, Design, Ceramic materials, Copper coatings, *Copper catalysts.

Kuczynski, Tadeusz.
METHODS OF TREATING LANGBEINITE. [1963] 20p. (figs. formulae omitted).
Order from SLA $1.60 63-16104

Trans. of [Przemysl Chemiczny (Poland) 1934, v. 18, p. 458-464].

DESCRIPTORS: *Potassium compounds, *Magnesium compounds, *Sulfates, Processing, Chlorides, Ammonia, Crystallization, Manufacturing methods.

Kumanin, K. G.
A LABILE THERMOREGULATOR [Labil'nyi Termoregul'yator]. [1963] 9p. 8 refs.
Order from OTS or SLA $1.10 63-14831

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1947, v. 20, no. 12, p. 1242-[1247].
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 59-19124, LC-355, Oct 49 [10]p.

DESCRIPTORS: *Calorimetry, *Furnaces, *Temperature control, *Thermocouples, Thermostats, Design.

A method of thermal analysis was worked out, based on the principle of automatic control of the temperature difference between the wall of a furnace and the sample being investigated (labile thermoregulator). The labile thermoregulator insures the correct securing of the physical expression of isothermal and polythermal processes. The method is just as sensitive as the differential method and leads to values of the thermal effects which are in very close agreement with the data obtained by static determinations. The principle of the labile thermoregulator, that of keeping a constant difference in temperature during heating or cooling can be applied to many technical fields, even in drying techniques. (Author)

Langauer, Donat.
INVESTIGATIONS IN THE TREATMENT OF LANGBEINITE. I. CONCERNING THE SPEED OF DISSOLUTION OF LANGBEINITE (NATIVE LANGBEINITE). [1963] 11p. (figs. formulae omitted) 20 refs.
Order from SLA $1.60 63-16103

Trans. of [Przemysl Chemiczny (Poland) 1934, v. 18, p. 464-470].

DESCRIPTORS: *Potassium compounds, *Magnesium compounds, *Sulfates, *Solubility, Velocity, Water, Sodium compounds, Hydroxides, Manufacturing methods.

Lasek, F. and Kudelka, F.
PROBLEMS IN PREPARATION OF ION EXCHANGERS BY PEARL CONDENSATION. 7 May 62 [13]p. (figs. refs. omitted) 6 refs.
Order from SLA $1.60 63-14023

Trans. of Chem[icky] Prumysl (Czechoslovakia) 1958, v. 8[33] p. 545-551.

DESCRIPTORS: *Ion exchange resins, Preparation, Particles, Condensation reactions, Polymerization, *Hydrodynamics, Equations.

The authors studied the influence of the experimental apparatus and physical conditions on the size of grains formed during suspension polycondensation in inert medium. The results were given mathematical formulation and compared with results of other authors. It was shown that the dependence of grain diameter on the Weber number forms a common basis for the types studied of ion exchange resins of spherical shape, produced by polycondensation. In addition to the dependence of the grain size on the Weber number, a narrower hydrodynamic relationship was studied for the case of Katex FN, starting from the concept of a pumping action of the stirrer. Experiments were conducted in vessels with thermometer wells as the only turbulence, producing projections. (Author)

Matsuda, Yoshiro; Nakahara, Yoshiro, and Mito, Masaishi.
SURFACE ACTIVE AGENT FROM WASTE FILTRATE OF MONO-CHLOROACETIC ACID MANUFACTURE. [1963] 6p. 1 ref.
Order from OTS or SLA $1.10 63-16441

Trans. of Japanese patent [publication] 1962-824. 16 Apr [62] appl. 19 Dec 58, by Dai Nippon Cellulloid Co. Ltd.

DESCRIPTORS: *Chloroacetic acids, *Wastes (Industrial), *Surface-active substances, Manufacturing methods, Fatty acids, Amines, Solvents, Acetones, Methyl radicals, Ethyl radicals, Butyl radicals, Ketones, Acetates, Ethers.

Meusel.
SEPARATION OF ALIPHATIC ALCOHOLS FROM ACCOMPANYING HYDROCARBONS BY EXTRACTION WITH AQUEOUS METHANOL [Abtrennung Aliphatischer von Begleitkohlenwasserstoffen durch Extraktion mit Wassrigen Methanal]. [1963] [22]p. Farben Experimental Group Me 219; Rept. no. 486.
Order from OTS or SLA $2.60 63-14821

Trans. of mono. (report) of Leuna Works, I. G. Farbenindustrie A.G., 22 Nov 44 (PB-95601).

DESCRIPTORS: *Aliphatic compounds, *Alcohols, *Methanols, *Solvent extraction, Oils, Hydrocarbons, Carbonyl radicals.

Murashige, Tadao.
DEFOAMING DEVICE. July 63, 7p. (figs. omitted).
Order from SA $16.00 SA Code-P-155

Trans. of published Japanese patent 3211/1952, cl. 13-A-3 (23-A-O) (36-A-02) appl. no. 12,713/1950, filed 29 Sep 50, pub. 22 Aug 52, by Mitsubishi-Kasei-Kogyo Co.

DESCRIPTORS: *Foams, Inhibition, *Antibiotics, Production.

Ost, H.
THE AMMONIA SODA PROCESS. [1963] 9p. 6 refs.
Order from SLA $1.10 63-14245

Trans. of Chemiker Zeitung (Germany) 1907, v. 31, p. 67-69.

DESCRIPTORS: *Solvay process, *Sodium compounds, *Carbonates, Manufacturing methods, Chlorides, *Ammonia.

Piechowicz, Tadeusz.
MECHANISM OF THE HYDRATION OF LANGBEINITE. III. RATE OF DISSOLUTION OF LANGBEINITE. [1963] [13]p. (figs. omitted) 6 refs.
Order from SLA $1.60 63-16109

Trans. of [Przemysl Chemiczny (Poland) 1935, v. 19, p. 122-125].

DESCRIPTORS: *Potassium compounds, *Magnesium compounds, *Sulfates, *Solubility, Velocity, Numerical analysis.

(See also 63-16103)

Pylaev, B. F.
THE NEWEST METHODS FOR CONVERSION OF SYLVINITE WASTE INTO TABLE SALT. [1963] [10]p.
Order from OTS or SLA $1.10 63-14597

Partial trans. (p. 24-28) of [Gorno-Obogatitel'noe Delo] (USSR) 1932, no. 1, p. 22-28.

DESCRIPTORS: *Wastes (Industrial), *Flotation, *Potassium compounds, *Sodium compounds, Chlorides, Production, Fertilizers.

Shokin, N.
CONCENTRATION AND SPECIALIZATION OF CHEMICAL PRODUCTION. USSR Industrial Development: Soviet Chemical Industry No. 81. 26 June 63 [20]p. JPRS: 19860.
Order from OTS $0.50 63-31112

Trans. of #Voprosy Ekonomiki (USSR) 1963, no. 3, p. 15-25.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, Costs, Sulfuric acid, Fertilizers, Materials, Transportation.

Smolenski, Kazimierz.
STUDY ON PRODUCTION OF SOME CHEMICAL PRODUCTS FROM ETHYLENE AND TECHNICAL GASES CONTAINING ETHYLENE. [1963] 21p. (figs. omitted) 8 refs.
Order from SLA $2.60 63-14028

Partial trans. (p. 152-158, 165-170, 172-175, 181-182) of Przemysl Chemiczny (Poland) 1927, v. 11, p. 146-182.

DESCRIPTORS: Gases, *Ethylene derivatives, *Chlorination, *Ethanes, Chlorides, Synthesis (Chemistry), *Vinyl chlorides, Polymerization, *Glycols, *Ethylene oxide, Propanols, Freezing point depressants, Insecticides, Solvents, Production.

Contents:
Chlorination of technical gases containing ethylene: Production of 1.2-dichloroethane (ethylene chloride)
Production of vinyl chloride and products of its polymerization
Production of glycol and ethylene oxide from chlorohydrine
Summary.

Suss, Heinrich.
A DEVICE FOR THE CONTINUOUS EXTRACTION OF SOLID, FOR EXAMPLE OLEAGINOUS, SUBSTANCES, ESPECIALLY SEED, BY MEANS OF SUITABLE SOLVENTS. [1963] [10]p.
Order from OTS or SLA $1.10 63-14529

Trans. of German patent 726,949, cl. 12 c, gr. 1, R 110,406 IV b/12 c, pub. 23 Oct 42, by Rheinmetall-Borsig A. G. (addition to patent 723,222, 13 Feb 38) pat. from 25 June 41, granted 17 Sep 42.

DESCRIPTORS: *Solvent extraction, *Seeds, Solids.

Topchiev, A. V., Polak, L. S. and others.
RADIATION-THERMAL CRACKING OF HYDROCARBONS. 10 Apr 63 [12]p. FTD-TT-62-1930.
Order from OTS $0.50 63-11657

Unedited rough draft trans. of mono. Radioaktivnye Izotopy i Yadernye Izlucheniya v Narodnom Khozyaistve SSSR, Riga, 1960, p. 206-210.

DESCRIPTORS: *Nuclear industrial application, *Radiation chemistry, *Hydrocarbons, Pyrolysis, *Radiolysis, Reaction kinetics, Radioactive isotopes, *Indium alloys, *Gallium alloys

The parameters for obtaining acceptable yields of commercially useful fractions are discussed. A description is given for a proposed RTC loop, and evidence is provided to substantiate the recommendation of a gallium-indium radiation source.

Civil Engineering

ROAD BUILDING UNDER TROPICAL CONDITIONS IN THE DEMOCRATIC REPUBLIC OF VIETNAM.
16 Apr 63, 8p. JPRS: 18732.
Order from OTS $0.50 63-21590

Trans. of Organisation für die Zusammenarbeit der Eisenbahnen. Zeitschrift (Poland) 1963, no. 1, p. 18-20.

DESCRIPTORS: *Roads, Construction, Civil engineering, *Tropical regions, *Vietnam, Surfaces, Rock (Geology), Bituminous coatings, Cements.

Ariano, R. and Tognon, G. P.
THERMAL VARIATIONS IN AN EXPERIMENTAL CONCRETE PAVEMENT SLAB (Variazioni Termiche in un Lastrone di Calcestruzzo di una Pavimentazione Sperimentale). [1963] [40]p. (foreign text included).
Order from SLA $4.60 63-14739

Trans. of l'Industria Italiana del Cemento, 1961, v. 31, no. 8, p. 385-396.

DESCRIPTORS: *Pavements, *Concrete, Foundations (Structures), Temperature, Civil engineering.

Evgrafov, G. K., Osipov, V. O., and Kolokolov, V. N.
HOW TO PREVENT THE FATIGUE BREAKDOWN OF METALLIC BRIDGE ELEMENTS. [1963] [5]p.
Order from OTS or SLA $1.10 63-16468

Trans. of Zheleznodorozhnyi Transport (USSR) 1962 [v. 44, no. 4] p. 50-52.

DESCRIPTORS: *Bridges, *Fatigue (Mechanics).

Rybal'skii, V.
CALCULATION OF CONSTRUCTION SCHEDULES AND PRIORITIES WITH THE AID OF ELECTRONIC COMPUTERS. 20 June 63, 11p. JPRS: 19768.
Order from OTS $0.50 63-31082

Trans. of Ekonomika Stroitel'stva (USSR) 1963, no. 3, p. 35-42.

DESCRIPTORS: *Management engineering, *Computers, *Construction, Scheduling, Costs, Numerical analysis.

Electrical and Electronic Engineering

"BUSINESS CLUB" SESSION CONDUCTED BY EDITORS OF EKONOMICHESKAYA GAZETA TO DISCUSS DEFECTIVE TELEVISION SETS BEING PRODUCED. USSR Industrial Development: Soviet Precision Equipment no. 87. 10 July 63, 27p. JPRS: 20117.
Order from OTS $0.75 63-31255

Trans. from Ekonomicheskaya Gazeta (USSR) 1963 [no. 15(88)] p. 38-42.

DESCRIPTORS: *Conferences, *Television equipment, *Reliability (Electronics), *Quality control.

METHOD FOR THE MANUFACTURE OF AN INSULATING MATERIAL WITH POROUS STRUCTURE, PREFERABLY INTENDED AS FILLER. [1963] 3p.
Order from ATS $5.00 ATS-35Q70G

Trans. of Danish patent 63,553, pub. 28 May 45, pat. period begins 9 Dec 40.

DESCRIPTORS: *Fillers, *Porous materials, Structural properties, *Insulating materials, Manufacturing methods.

METHOD FOR THE PREPARATION OF ALKALINE BATTERIES. [1963] 9p.
Order from OTS or SLA $1.10 63-16326

Trans. of German patent 649,659, pub. 19 Aug 37, issued 30 Aug 37, by Drumm Battery Co., Ltd., Dublin.

DESCRIPTORS: *Batteries and components, *Alkaline cells, Preparation, *Zinc electrodes, *Nickel electrodes, Silver electrodes, Graphite, Electrodeposition.

The patent involves a method for the preparation of alkaline batteries in which the active constituents of the negative electrodes consist of zinc which is precipitated from a solution of zinc oxide in caustic alkali, and in which the active constituents of the positive electrodes are prepared of nickel oxide and/or silver oxide with or without graphite and/or nickel flakes, characterized in that each negative carrier plate which consists entirely or mainly of nickel and has a hard and pure surface, undergoes a pretreatment before the deposition of zinc, by which pretreatment the nickel becomes charged with hydrogen. Each negative carrier plate undergoes an electrolytic pretreatment in a caustic alkali solution, by means of which the smooth nickel surface becomes saturated with hydrogen. Each negative carrier plate of the battery is enclosed in a lattice, which is covered with an ebonite plate to prevent an excessive deposition of zinc on this place, caused by strong currents used in the charging.

NEW DISTRIBUTION CABINETS [AND] NEWS OF ELECTRICAL EQUIPMENT PLANTS. USSR Industrial Development: Soviet Electrical Equipment No. 53. 24 June 63 [6]p. JPRS: 19808.
Order from OTS $0.50 63-31097

Trans. of Promyshlennaya Energetika (USSR) 1963 [v. 18] no. 5, p. 53, 60.

DESCRIPTORS: *Junction boxes, Transformers, *Hydroelectric power systems, *Circuit breakers, Electrical equipment.

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS, MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION USSR, RADIO ENGINEERING SERIES, 1963, VOL. 6, NO. 1. 28 June 63, 265p. JPRS: 19943.
Order from OTS $4.00 63-31162

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Radiotekhnika (USSR) 1963, v. 6, no. 1, p. 3-114.

DESCRIPTORS: *Radio, *Electronics, *Engineering, Stroboscopes, Oscillation, Cathode ray tubes, Generators, Tunnel diodes, Ceramic materials, Electric insulation, Electromagnetic waves, Propagation, Suppressors, Waveguide couplers, Reliability (Electronics), Ferroelectric materials, Antenna configurations, Electrical impedance, Trigger circuits, Integrators (Computers), Theses, Engineering personnel

Contents:
Stroboscopic oscillography of signals in the nanosecond range, by M. E. Glushovskii
Use of the theory of single thin wire in the analysis of process in cathode-ray tubes, by Yu. Ya. Yurov
Inverse function generator using diode elements, by L. F. Tolimanchuk and A. A. Tyutin
Use of tunnel diodes in high-speed information-storage devices, by B. N. Kononov, and A. A. Orlokovskii
Destructive voltage of ceramic through insulators at high and microwave frequencies, by I. P. Bogoroditskii and others.
Dispersion properties of a slow-wave system of a crest-slot type, by A. S. Zav'yalov and V. L. Mironov
Amplitude-phase method of suppression of pulsed noise in radiotelegraphy, by D. V. Ageev and V. F. Ryabkov
Concerning the calculation of the transfer coefficient of a cascade of 2-waveguide directional couplers, by S. M. Finkel'shtein
Estimate of reliability of a radioelectronic system containing several identical blocks, by L. L. Barvinskii
Propagation characteristics of electromagnetic waves in periodic layered structures, by G. I. Gladyshev, and others.
Measurements of the parameters of ferroelectrics with variable dielectric constant by the waveguide method, by Yu. M. Poplavko
Distributed pulsed-oscillation generator, by L. S. Bartenev
Account of the influence of active losses in long antenna arrays on the gain, by E. A. Vorob'ev
Characteristic impedance of H-shaped metal-dielectric waveguide, by E. M. Guttsait
Concerning the stabilization of the pulse duration in trigger circuits, by V. I. Kuz'mich
Functional converter with digital output, by A. I. Petrenko and M. I. Shlezinger
Defense of dissertations, by F. V. Kushnir
Concerning the article , by O. G. Vendik
"Synthesis of an array of radiators with nonmechanical beam scanning", by A. P. Sakharov
Response by the author (O. G. Vendik)
On the 75th birthday of Professor M. A. Bonch-Bruevich, by V. Yu. Roginskii
The late Georgii Aleksandrovich Tyagunov

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 55. 27 June 63, 7p. JPRS: 19900.
Order from OTS $0.50 63-31141

Trans. from Kommunist, Erevan (USSR) 1963, 21 Feb, p. 2; Rabochaya Gazeta (USSR) 1963, 10 May, p. 1; Pravda Vostoka (USSR) 1963, 21 Feb, p. 3; Pravda, Leningrad (USSR) 1963, 22 Feb, p. 4; Sovetskaya Litva (USSR) 1963, 22 Feb, p. 2.

DESCRIPTORS: Industrial production, *Electrical equipment, *Electric motors, *Generators, Hydroelectric power systems, *Transformers, Welding, Tests, *Electric relays, Automation, Machine tools.

Contents:
Modernization of operations at Erevan electrical motor plant, by N. Mateiko
First hydrogenerator for Dneprodzerzhinskaya GES manufactured
Production of welding transformers and household electric fans at Tashkent electric machinebuilding plant
Testing of new devices at All-Union Electrical Engineering Institute imeni Lenin
New items produced by Kedainyai electrical apparatus plant, by B. Zhemaitis.

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 56. 28 June 63, 37p. JPRS: 19957.
Order from OTS $1.00 63-31171

Trans. of 19 selected articles from 1962-63 issues of 13 Russian newspapers.

DESCRIPTORS: *Industrial production, *Electrical equipment, Turbines, Generators, Electric power production, Arc welding, Ultrasonic radiation, Welding, Electrical engineering, Industrial plants, *Transformers, Electric cables, Electric wire, *Induction motors, *Electric motors, Power equipment, Commerce.

Contents:
A giant Khar'kov plant is honored with a diploma, by E. Gortinskii
A 320,000-kilowatt turbogenerator, by I. Baranova
Hydroelectric generator for Vietnam
Electric welding of non-ferrous metals
Ultrasonic welding
Workers of Leningrad "Elektrosila" plant pledge to increase production, by V. Murav'ev
Wide horizons of electrotechnology, by I. Chumburidze
The birth of a plant in Namangan, by M. Palatskii
A high-frequency transformer plant, by A. Zakhar'yan
A giant electrotechnical combine
New victory of electrical machine builders, by E. Gabuzova
Low-frequency welding machine developed by the All-Union Scientific Research Institute of Electric Welding Equipment
Giant disconnector assembled by Leningrad "Elektroapparat" plant
New Andizhan "Elektrodvigatel'" plant steps up production of electric motors
Armored cable with plastic insulation produced by Perm' electrical engineering combine cable plant
Vil'nyus electric welding equipment plant produces welding units for domestic use and export
8,000-kilowatt induction produced by the Novosibirsk turbogenerator plant
Leningrad "Elektrik" plant putting out 20 new types of electric welding equipment
Heavy electric equipment manufactured by Erevan "Armelktro" plant

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 57. 1 July 63, 13p.
JPRS: 19970.
Order from OTS $0.50 63-31176

Trans. of Vestnik Elektropromyshlennosti (USSR) 1963 [v. 34] no. 5, p. 1-3, 66.

DESCRIPTORS: *Industrial production, *Electrical equipment, *Plastics, Polymers, Synthetic rubber, Sheets, *Varnishes.

Contents:
Use synthetic polymer materials more widely, by V. A. Baev and V. V. Maslov
Moldavizolit plant spearheads expanding production of foiled plastics, by G. F. Pologov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 58. 3 July 63, 22p.
JPRS: 20009.
Order from OTS $0.75 63-31196

Trans. of 12 selected articles from 1963 issues of 7 Russian newspapers.

DESCRIPTORS: *Industrial production, *Electrical equipment, Turbines, Generators, *Electric power production, *Electric insulation, *Electric furnaces, Electric motors, Soldering, *Transformers, Commerce, Welding, Machines, *Cooling and ventilation equipment.

Contents:
For the best turbogenerators in the world, by L. Stanislavskii
Expression of condolences to A. A. Mirzoev
The "Azelektroizolit" plant is operating successfully
New products at the Moscow high-frequency electric furnace plant
An automatic installation for soldering rotor ends
A new type of high-voltage transformers at the Chirchik transformer plant
Poor quality home appliances
The Elektrosila plant exports its goods abroad
New welding machine designed by All-union Scientific Research Institute of Welding equipment
Production is increasing at the Gomel'kabel' plant
New ventilators, by G. Ordelov
A new five-machine unit manufactured by "Elektrosila" plant

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 59. 9 July 63, 51p.
JPRS: 20093.
Order from OTS $1.50 63-31240

Trans. of 17 selected articles from Oct-Dec 62 and Jan-Feb 63 issues of 13 Russian newspapers.

DESCRIPTORS: *Industrial production, *Electrical equipment, Industrial plants, Labor, Welding, Commerce, *Transformers, Electrical engineering, *Electric cables, *Electric motors, Pumps, Steel, Signal lights, *Hydroelectric power systems, Mercury, *Rectifiers, *Drills, *Well drilling.

Contents:
Equipment manufactured at Armelektrozavod, by G. Liloyan
Reconstruction of Leningrad electrotechnical plant affirmed, by G. Amkhanitskii
Welding equipment produced at the Leningrad "Elektrik" plant, by I. Churin
Production of the Leningrad electromechanical plant
Transformers made at the Chirchik "Elektromash" plant, by N. Solov'eva
Progress in production at the Eesti Kaabel' plant, by Yu. Nilov
Public design bureau at the Armenian electrical machine-building plant imeni V. I. Lenin, by G. Tevyan
An economy drive at the Zestafon cable plant, by O. Nikabadze
Production at the Kar'kov electrotechnical plant, by A. Malezhik
Production of pumps at the Kishinev electromachine-building plant imeni Frunze, by M. V. Seredin
Shortage of cold-rolled steel for transformers, by V. Poroshin
The state of production at the Kaunas "Pirmunas" plant, by B. Vodzinskii
Explosion-proof electric pumps made at the electromachine-building plant imeni Frunze, by E. Khmel'kovskaya
Regulation of supply to the Cheboksary electrical equipment plant needed
An open letter to workers of the Leningrad "Elektrosila' plant, by N. Khotulev and others
The Stavropol' mercury rectifier plant
The E-170 sectional electric drill attains depth of 4000 meters in Azerbaidzhan, by T. Bagirov and others.

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 60. 11 July 63, 16p.
JPRS: 20122.
Order from OTS $0.50 63-31258

Trans. of 11 articles from 1962-63 issues of 4 Russian newspapers.

DESCRIPTORS: *Industrial production, *Electrical equipment, Capacitors, Commerce, Industrial plants, Professional personnel, *Arc welding, Machines, Management engineering, *Generators, Design.

Contents:
News and notes from the field of electrical equipment
Various "help wanted" and machinery "for sale" advertisements
Six new types of electric welding machines are developed
A new machine for welding radiators
Improve the planning of targets for the Khar'kov Elektrotyazhmash plant, by I. Pakhomov
Coordinate design work in the electrical machine building industry, by V. Romanov and V. Titov
Director of Sverdlovsk current transformer plant.

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 61. 19 July 63, 16p. JPRS: 20252.
Order from OTS $0.50 63-31330

Trans. from Sovetskaya Estoniya (USSR) 1963, 2 June, p. 4; Bakinskii Rabochii (USSR) 1963, 2 June, p. 1; Komsomol'skaya Pravda (USSR) 1963, 5 May; Sovetskaya Kirgiziya (USSR) 1963, 7 May; Ekonomicheskaya Gazeta (USSR) 1963, no. 11[84]; no. 14[87] p. 47; no. 15[88] p. 46; Pravda, Leningrad (USSR) 1963, 11 May.

DESCRIPTORS: *Industrial production, *Electrical equipment, Personnel management, *Electric insulation, *Rectifiers, Mercury, Hydroelectric power systems, Generators, *Laboratory furnances, Electromagnetic pulses, *Transformers (Electronics), Voltage regulators, *Turbines, *Compressors casting, Electric motors, Machines, Commerce.

Contents:
Help wanted ad for various positions at "Eesti Kaabel plant
Improvement of manufacturing processes at Baku electric machinebuilding plant (BEMZ)
Development of new mercury rectifier
Completion of tests of "TGV-200" standard turbogenerator
News of Przheval'sk mechanical casting plant
Advertisement offering pulse transformers and voltage stalilizers for sale
Advertisement offering various types of twisting machines for sale
Advertisement offering turbocompressors for sale
Advertisement offering pressure casting machines for sale
Advertisement of Khar'kov sewing machine plant offering 25,000 motors for sale
Help wanted ad for norm-setter at Nerchinsk electromechanical plant
Advertisement of "Elektropuskatel" plant offering heat-resistant micanite for sale
Advertisement of Tiraspol' electrical apparatus plant offering various items for sale
Tomkabel' plant offers two steam machines for sale
Description of production at Leningrad electromechanical equipment plant
Foreign exports of "Sevkabel" plant.

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 62. 19 July 63, 17p. JPRS: 20260.
Order from OTS $0.50 63-31335

Trans. of 10 selected articles from Feb, May-June 63 issues of 8 Russian newspapers.

DESCRIPTORS: *Industrial production, *Electrical equipment, *Plastics, Quality control, Logistics, *Rectifiers, Mercury, *Transformers, *Circuit breakers, Copper, Aluminum, Fork-lift vehicles, Shafts, *Electric switches, *Generators, Hydroelectric power systems.

Contents:
Shortage of plastics in electric machine building industry, by Yu. Tarnopol'skii
Low quality of products produced by "Vol'ta" plant
Rush construction project at Cheboksary electrical equipment plant
Measures adopted at "Elektroshchit" plant
New Stavropol' rectifier plant, by A. Shavrin
Change of technological process at high-voltage equipment shop of Vol'ta plant
Experimental electric platform trucks, by M. Lapytov
Initiation of production of third rotor shaft at "Elektrosila" plant
Production of air switches for Yuzhno-Ural'Skaya hydroelectric power stations
Completion of manufacture of hydraulic generators for Mettur-Tunnel.

USSR SCIENTIFIC ABSTRACTS: ELECTRONICS AND ENGINEERING NO. 1. 18 June 63, 74p. JPRS: 19704.
Order from OTS $2.00 63-31050

Consists of abstracts of articles from USSR scientific and technical journals.

DESCRIPTORS: *Abstracts, *Electronics, *Engineering, Reflex klystons, Frequency multipliers, Waveguides, Electric discharges, Magnetic amplifier, Power supplies, Resonators, *Circuits, *Masers, *Lasers, *Communication systems, *Communication theory, Materials, Electrical properties, *Computers, Automatic pilots, Control systems, Semiconductor devices, *Gyro compasses, Cermets, Electrodes, Fuel cells, *Turbines, Load distribution, Hydroelectric power systems, Nucleate boiling, Corrosion, Metals, *Metallurgy, Test equipment, Mechanical properties, Ultrasonic radiation, Welding, Pipes, Concrete, Glass textiles

Contents:

I. Electronics	II. Engineering
Components	Computers
Instruments	Control devices
Masers and lasers	Control systems
Circuit design	Gyros
Communications systems	Mechanical engineering
Information theory	Power engineering
Materials	Metal forming techniques
Miscellaneous	Materials
	Miscellaneous.

Hayek, Zdenek and Eckertova, Ludmila.
THE CONSTRUCTION OF A STEADY FIELD CATHODE. [1963] 4p. 4 refs.
Order from SLA $1.10 63-18087

Trans. of die Naturwissenschaften (West Germany) 1962, v. 49, no. 9, p. 201.

DESCRIPTORS: *Cathodes, Construction, *Aluminum electrodes, Coatings, Dielectrics, Aluminum compounds, Oxides, Emissivity.

Cathodes of the type Al-Al_2O_3-Me were investigated. (Me signifies a metal, e.g. Ag, Au, Pt, etc.). A voltage of a few tens of volts is sent between the Al-electrode and the semi-permeable metallic layer above. If the thickness of the dielectric is small enough, a strong electric field is generated which causes an emission of electrons from the metallic substrate. A part of these electrons can penetrate through the dielectric and the upper electrode and be emitted into the vacuum. In comparison with field cathodes using porous layers of magnesium oxide, these

cathodes have the advantage that the starting process is eliminated. In comparison with the pointed field cathodes they have the advantage of using plane surfaces that can be of any shape; mechanically they are less flimsy, and their use does not involve either an extreme vacuum or a high voltage.

Krasovskii, N. N.
OPTIMAL CONTROL IN LINEAR SYSTEMS WITH TIME LAGS. 24 June 63, 10p. 9 refs. JPRS: 19822.
Order from OTS $0.50 63-31103

Trans. of Sibirskii Matematicheskii Zhurnal (USSR) 1963, v. 4, no. 2, p. 295-302.

DESCRIPTORS: *Linear systems, *Control systems, Time-lag theory, Integrals, Functional analysis, Stabilization, Errors.

This paper considers the problem of the determination of the stabilizing action of a controller which will minimize the integral quadratic error in a linear control system having small after effects. The problem is solved using the small parameter method. (Author)

Millard, Jacques.
REGULATED CURRENT SUPPLY FOR ELECTRONIC FLASHES. [1962] 6p.
Order from SLA $1.10 62-18912

Trans. of Journ[al] de Physique et le Radium (France) 1961, v. 22, no. 6, p. 139A-140A.

DESCRIPTORS: Electronic equipment, Capacitors, *Current regulators.

Papadache, I.
SCIENTIFIC SESSION OF THE AUTOMATION COMMISSION OF THE RUMANIAN ACADEMY [8 NOV 62]. 18 June 63, 8p. JPRS: 19726.
Order from OTS $0.50 63-31066

Trans. of Automatica si Electronica (Rumania) 1963, v. 7, no. 1, p. 45-46.

DESCRIPTORS: *Conferences, *Automation, *Rumania.

Saal, R.
FILTER DESIGN USING A CATALOG OF NORMALIZED LOW-PASS FILTERS, PT. I. [1963, 32]p. (tables omitted) 13 refs.
Order from SLA $3.60 63-18084

Trans. of Frequenz (Germany) 1961, v. 15, no. 4, p. 111-122.

DESCRIPTORS: Electronic equipment, *Filters (Electromagnetic wave), *Low pass filters, Design, Mathematical analysis.

Systematic filter calculations were carried out with the aid of electronic computer systems and the resultant data were compiled in catalog form. Tables show the standardized values of the circuit elements of the Chebyshev low-pass filters and Cauer parameter low-pass filters with resistive termination at either end for the degrees n = 4 to n = 9 and for 11 different reflection coefficients p at a time (and for 11 different maximum variations of the insertion loss within the pass band in each case, respectively). Designing filters with the aid of the tables is shown with reference to typical applications.

Saibel', A. G.
FUNDAMENTALS OF RADAR. 15 Feb 63 [407]p. 27 refs. FTD-TT-62-1215; AD-298 779.
Order from OTS or SLA $22.25 63-19323

Unedited rough draft trans. of mono. Osnovy Radiolakatsii, Moscow, 1961, 384p.

DESCRIPTORS: *Radar, Radar targets, Range finding, *Radar equipment, Radar signals, Radar tracking, Electromagnetic warfare.

Basic attention has been devoted to methods of radar location and ascertaining the relationships between the tactical and engineering parameters of radars. The problems of engineering realization of the various methods are set forth in less detail and only insofar as is necessary to illustrate the essence of the method being considered. The manual contains ten chapters in which are considered in sequence general considerations concerning radar, the reflecting properties of radar targets, methods for radio range finding and radio direction finding, the detection of radar signals, factors determining the range of radar and the accuracy of determination of the location of the targets, methods for the selection of moving targets, the relaying of radar information and, finally, combat radar techniques. The present manual gives significant development to methods for statistical analysis of the dependence of the tactical parameters of radars upon the engineering parameters. An exposition of the methods and an anslysis of the position-determination error, as well as an analysis of the dynamic properties of automatic radio range finders as pulse followup systems is introduced.

Schulz, E., Wild, W. and others.
A DIRECTIONAL RADIO SYSTEM WITH PULSE-PHASE MODULATION FOR 12 AND 24 TELEPHONE CHANNELS. PTS. C. HIGH FREQUENCY EQUIPMENT. D. THE ANTENNA SYSTEM. (Ein Richtfunksystem mit Pulsphasenmodulation zur Übertragung von 12 und 24 Fernsprechkanalen. C. Das Hochfrequenzgerat. D. Die Antennenanlage). [1963] [40]p.
Order from SLA $3.60 63-14406

Trans. of [NTZ: Nachrichtentechnische Zeitschrift] (West Germany) 1952 [v. 5] no. 10, p. 456-467.

DESCRIPTORS: *Radio communication systems, *Radio equipment, *Antennas, Antenna configurations, Electric cables, Coaxial filters, Multiplex, Filters (Electromagnetic wave), Attenuation, Transmitter-receivers, Direction finding, Multichannel telephone systems, High frequency, Lens antennas, Parabolic antennas.

The basic aspects in planning antenna installations for directional radio systems are touched upon and the more important characteristics of the antennas are defined. Described are an elliptical (lens) antenna with an edge length of 1.75 meters and parabolic antennas 3, 2, and 1.2 meters in diameter, whose characteristics are compared in the 2450-2700 Mc. band. The elliptical antenna attains an efficiency of 48%, a mean Δ m value of 7% and a feedback attenuation of more than 5.5 N. (48 db); the parabolic antenna a mean efficiency 60 to 55%, a mean Δ m value of 16 to 27% and a feedback attenuation of 5.5 to 4.5 N. (48 to 39 db). A new centimeter-wave coaxial cable with 5.5 N/km (48 db/km) attenuation for simple installations is mentioned. A new cavity-type diplexer for simultaneous operation of a single antenna and a dual-circuit coaxial filter are described. The attenuation in relation to the frequencies to be cut off amounts to more than 8 N. (70 db) and the acceptor attenuation to less than 0.1 N. (0.9 db). Finally, a report is given on a multiplex filter system with frequency-wise successively arranged filters for directional link operation of three transmitters or three receivers. (Author)

Mechanical Engineering

USSR INDUSTRIAL DEVELOPMENT: SOVIET POWER MACHINERY NO. 15. 11 July 63, 3p. JPRS: 20131.
Order from OTS $0.50 63-31263

Trans. of 8 short articles from Apr/May 1963 issues of 6 Russian newspapers.

DESCRIPTORS: *Industrial production, *Power equipment, *Machines, *Steam turbines, Turbine blades, Turbines, Compressors, Commerce, *Gas turbines, Industrial plants, Electrical network, Boiler, Sea water, Natural gas.

USSR INDUSTRIAL DEVELOPMENT: SOVIET POWER MACHINERY NO. 14. 9 July 63, 16p. JPRS: 20079.
Order from OTS $0.50 63-31234

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 4, p. 42-51; from Pravda, Leningrad (USSR) 1963, 9 Feb, p. 4; Trud, Moscow (USSR) 1963, 15 Feb.

DESCRIPTORS: *Industrial production, *Power equipment, *Machines, *Internal combustion engines, *Transformers, *Electric motors, *Electric insulation, Generators.

Contents:
Increased production in Leningrad metallurgical plants
Altai motor plant produces its fifty-thousandth motor
The new transformers and reactors of the Moscow electrical plant, by A. G. Krayz
New Series of DAZO 12-16 gage electric-motors, by I. L. Kleinman and I. A. Belyaev
Insulation for turbo-generators, by V. K. Sharov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REFRIGERATION MACHINERY NO. 14. 2 July 63, 13p. JPRS: 19986.
Order from OTS $0.50 63-31181

Trans. of 10 selected articles from 1962-63 issues of 9 Russian newspapers.

DESCRIPTORS: *Industrial production, *Refrigeration systems, *Machines, *Industrial plants, Construction, *Commerce, Industrial relations.

Contents:
Difficulties in the reconstruction of the Moscow Kompressor plant, by V. Borevich and F. Kapustin
Criticism of Baku electric consumer refrigerator plant reconstruction, by A. Umbatov
Kishinev refrigerator sales
Soviet refrigerator production
New refrigerators
The Lithuanian Snaige refrigerator
The Snaige refrigerator
Production of the Snaige refrigerator, by V. Figurinas
Increase in refrigerator production noted for 1963
Letters on low-quality refrigerators bring results

USSR INDUSTRIAL DEVELOPMENT: SOVIET REFRIGERATION MACHINERY NO. 15. 8 July 63, 8p. JPRS: 20070.
Order from OTS $0.50 63-31233

Trans. of Nauka i Tekhnika (USSR) 1963, no. 2, p. 38; Mashinostroitel' (USSR) 1963, no. 5, p. 22; Pravda Ukrainy (USSR) 1963, 8 Feb, p. 2; Pravda, Moscow (USSR) 1963, 12 Feb, p. 2; Kazakhstanskaya Pravda (USSR) 1963, 20 Feb, p. 2; Sovetskaya Latviya (USSR) 1963, 22 Feb, p. 2; Pravda, Leningrad (USSR) 1963, 28 Feb, p. 2.

DESCRIPTORS: *Industrial production, *Refrigeration systems, *Machines, Industrial plants, Commerce, *Refrigerant compressors, Refrigerants, *Refrigerant condensers.

Contents:
New refrigeration machinery, by G. Grant
New refrigerator plant in Donetsk
The Saratov refrigerator
The ADS-150 refrigerator installation
The Riga Kompressor plant
Refrigeration plants established
The AKV-FVBs6 compression condenser unit and the KhMB-FUBs12 refrigeration machine.

Nartov, Yu. A. and Nartova, E. T.
A DEVICE FOR DETERMING THE TWIST ANGLE OF A ROTATING SHAFT. 6 Feb 63 [5]p. FTD-TT-62-1807. AD-299 637.
Order from OTS or SLA $1.10 63-19183

Unedited rough draft trans. of Russian patent 131943 (643955/25) 11 Nov 59.

DESCRIPTORS: *Shafts, Rotation, *Deformation, Torque, *Measuring devices (Electrical and electronic), Design, Measurement, Telemeter systems.

The special feature of the device proposed is that a string vibrator is used in combination with a telemetric deformation-recording system containing a high-frequency oscillator, the carrier frequency of which is modulated by the oscillation frequency of the vibrator, while the signals are picked up by a receiver which is loaded by a frequency meter with a scale calibrated in units of twist angle. An arrangement of this kind makes it possible to eliminate slip-ring devices.

Ordnance, Missiles, and Satellite Vehicles

PROTECTIVE STRUCTURES AND COMPONENTS: SOVIET LITERATURE REVIEW PRIOR TO 29 MAR 63. Rept. 8 on Ground Support Equipment, AID Work Assignment no. 13. 6 June 63 [23]p. 22 refs. AID Rept. P-63-79.
Order from OTS or SLA $2.60 63-23152

DESCRIPTORS: *Ground support equipment, *Bridges, *Transportation, Construction, Pipelines, *Launching sites, Hoists, *Climatology, Terrain, Aral Sea, Geography, *Railroads, *Containers, Storage, Preservation.

Contents:
Transport
Launch site (E6 accessories--Gantries)
Natural environmental conditions
Packaging, preservation, and storage (A2 containers).

Al'pert, Ya. L., Belyanskii, V. B., and Kutyakov, A. F.
A COHERENT RADIO RECEIVER FOR RECORDING THE DIFFERENCE IN DOPPLER SHIFT OF RADIO FREQUENCIES TRANSMITTED FROM AN ARTIFICIAL EARTH SATELLITE, tr. by B. W. Kuvshinoff. 22 Apr 63 [20]p. 4 refs. APL/JHU TG 230-T353.
Order from OTS $0.75 63-11651

Trans. of #Geomagnetizm i Aeronomiya (USSR) 1963, v. 3, no. 1, p. 157-170.
Another trans. is available from OTS $1.50 in 63-21757, JPRS-19069, 7 May 63, 50p.

DESCRIPTORS: *Satellites (Artificial), Radio transmission *Doppler effect, *Atmospheric refraction, *Radio receivers, Radio waves, Recording systems, *Frequency multipliers, Phase measurement, Antennas.
For abstract see Technical Translations 10: 61, 1963.

Blinov, I. F.
THE EXPLOSION DANGERS IN DINITRO COMPOUNDS OF THE BENZENE SERIES. 1962 [14]p. 32 refs.
Order from OTS or SLA $1.60 AEC-tr-5528

Trans. of Khimicheskaya Promyshlennost' (USSR) 1959 [no. 5] p. 419-425.

DESCRIPTORS: *Benzenes, *Nitro radicals, Explosions, Nitrobenzenes, *Explosive materials, Sensitivity, Detonations.

Our research aimed at the determination of the explosive properties of dinitro compounds. In addition to this, we studied their sensitivity to mechanical and thermal initiation (impact, friction, heating, flame, and so on). The experiments were conducted with the following industrial dinitro compounds: dinitrobenzene, dinitrotoluene, dinitrophenol, dinitrochlorobenzene, dinitroaniline and picramic acid. (Author)

Mymrin, M. G. and Faenov, Ya. I.
PRINCIPLES OF ANTI-MISSILE DEFENSE [AND] THE ANTI-MISSILE MISSILE. 10 July 63, 8p. 14 refs. JPRS: 20101.
Order from OTS $0.50 63-31244

Trans. of Vestnik Protivovozdushnoi Oborony (USSR) 1961 [v. 36] no. 4, p. 24-27; no. 8, p. 79-80.

DESCRIPTORS: *Antimissile defense systems, *Guided missiles, *Early warning system.

Ryabchikov, Evgenii.
FIVE GREAT YEARS. 16 Apr 63 [7]p. FTD-TT-63-296.
Order from OTS or SLA $1.10 63-19520

Unedited rough draft trans. from Rabochaya Gazeta (USSR) 1962, 4 Oct, p. 4.

DESCRIPTORS: *Astronautics, *Space flight, *Satellites (Artificial), Astronauts.

A review of Soviet space ventures.

Shchukin, A. N.
DYNAMIC AND FLUCTUATION ERRORS IN GUIDED VEHICLES. 26 Mar 63 [211]p. 13 refs. FTD-TT-62-1087. AD-401 738
Order from OTS or SLA $14.50 63-19174

Unedited rough draft trans. of mono. Dinamicheskie i Flyuktuatsionnye Oshibki Upravlyaemykh Ob"ektov, Moscow, 1961, 214p.

DESCRIPTORS: Vehicles, *Guidnance, *Guided missiles, Dynamics, Errors, Control systems, Linear systems, Feedback, Noise (Radio), Radio interference, *Operational calculus, Differential equations, Transformations (Mathematics), Homing devices.

The book deals with the determination of the physical nature, character, and magnitude of deviation of guided vehicles from idealized motion trajectories expected on the basis of design considerations. The guided objects, together with the complex of devices used to control them, are in this case considered as unified systems possessing a limited number of parameters that characterize error magnitudes under various conditions of object motion. The book aims to give an approximate qualitative evaluation of the basic factors affecting the accuracy of guided objects. At the same time, the book presents in the simplest and clearest possible form the basic physical processes occurring in systems containing controlled members. (Author)

Tabouis, Francois and Vaganay, Jean.
LABORATORY SETUP FOR THE INVESTIGATION OF CONTINUOUS PROCESSES. [1963] 6p. 2 refs.
Order from OTS or SLA $1.10 63-16422

Trans. of Memorial des Poudres (France) 1955, v. 37, p. 413-416.
Other translations are available from LC or SLA mi$1.80, ph$1.80 as 59-12018, Mar 58 [8]p. and from SLA as 58-804.

DESCRIPTORS: *Explosives, Chemical analysis, *Laboratory equipment, Design, RDX.

For abstract see Technical Translations 2: 720, 1959.

Sanitation and Safety Engineering

Giordani, Mario.
CHLORINATION METHANE. [1963] 8p. (figs. tables omitted).
Order from SLA $1.10 63-14366

Trans. of Congr[eso] Intern[acional de] Quim[ica] Pura [y] Aplicada (International Congress of Pure and Applied Chemistry) (no. 9) Madrid, 1934, [Proceedings] 1935, v. 4, p. 371-382.

DESCRIPTORS: *Water supplies, Purification, *Wastes (Sanitary engineering), Fermentation, *Natural gas, *Methanes, *Chlorination, Methyl radicals, Chlorides, Production, Copper catalysts, Thermodynamics.

Giryn, Wieslaw and Grzeszczyk, Kazimierz.
BLANKET FOR EXTINGUISHING FIRE AND FOR PROTECTING AGAINST THERMAL AND RADIOACTIVE RADIATIONS 10 May 63 [5]p. FTD-TT-63-369.
Order from OTS or SLA $1.10 63-19649

Unedited rough draft trans. of Polish patent 40,188 (cl. 61a, 10/01, 8 Aug 56) pub. 15 Oct 57.

DESCRIPTORS: *Safety, *Glass textiles, *Fire-resistant textiles, Impregnation, Ammonium compounds, Phosphates, Carbonates, Chlorides, Lead compounds, Sulfides, *Thermal radiation, Alpha particles, Beta particles, Thermal neutrons, Radiation injuries, Burns, Countermeasures, Shielding, *Fire extinguishers.

The invention involves a blanket for extinguishing fire and to protect against thermal and radioactive rediation, made of one, two or three glass fiber layers, distinguished by the fact, that one or a greater number of layers is saturated with substances decomposing under the effect of high temperature and producing nonflammable thermal decomposition products and by the fact that one or more layers of the fabric is saturated with substances, which stop or hinder the penetration of thermal and radioactive radiation. (Author)

Skadovskii, S. N., ed.
SOVIET RESEARCH IN MARINE BIOCENOSIS.
24 July 63, 138p. JPRS: 20327.
Order from OTS $2.75 63-31370

Trans. of mono. Biotsenozi Obrastanii v Kachestve Biopoglotitelya (Fouling Communities as Bioabsorbents) Moscow, 1961, p. 8-15, 130-220, 297-314, 341-349.

DESCRIPTORS: *Marine biology, *Ecology, *Fouling, Scientific research, Quantitative analysis, Surfaces, Geometric forms, Chemical analysis, Plankton, *Algae, Water supplies, Sanitary engineering, *Strainers, *Purification.

Contents:
Research direction and objectives, by S. N. Skadovskii and V. I. Uspenskaya
Special methods of determining the quantitative features of fouling communities, by M. A. Messineva and V. I. Spenskaya
Seasonal quantitative changes in fouling communities, by S. N. Skadovskii and others
The development of biocoenoses in relation to the nature and shape of artificial surfaces, by M. A. Messineva and V. I. Uspenskaya
Development of phytocoenoses and their uptake of organic matter in the "Dipper", the stilling basin of the Rublevo pumping station, by S. N. Skadovskii and others
Biological and chemical analyses of biocoenoses on metallic sieves (inclusive period) Moscow River, summer 1954
Experimental studies of growth accumulation on sieves in an experimental setup at the Rublevskaya water-pumping station, by S. N. Skadovskii and others
Perspectives of biophysical-chemical methods of treating water for purposes of water supply, by S. N. Skadovskii and others.

Zolotova, E. F.
THE WORK OF AN INDUSTRIAL APPARATUS FOR DEFLUORIDATING DRINKING WATER (Opyt Raboty Proizvodstvennoi Ustanovki po Obesftorivanyu Pit'evoi Vody). Mar 63 [10]p. RTS-2213.
Order from OTS or SLA $1.10 63-15954

Trans. of Vodosnabzhenie i Sanitarnaya Tekhnika (USSR) 1962, no. 6, p. 12-15.

DESCRIPTORS: *Fluorides, *Water, Absorbents, *Industrial equipment, Oxides, *Aluminum compounds, Ion exchange, Sulfates.

Untreated water is passed through filters filled with activated aluminum oxide ("absorbant") until the fluoride content reaches 1 to 1.5 mg/l. Then the filter is regenerated with a solution of aluminum sulfate and the absorbant is washed with water. A description of the defluoridation apparatus and its operation is given.

FOOD, HANDLING, AND PACKAGING EQUIPMENT

MANUFACTURING OF COMPRESSED MILK PRODUCT FROM DRIED MILK IN CERTAIN SHAPES OR FORMS. [1963] [5]p.
Order from OTS or SLA $1.10 63-14987

Trans. of German patent 649,831, cl. 53c, gr. 5, G 89646 IV a/53a, issued 7 Sep 37, pub. 19 Aug 37, by International Credit, Inc., Switzerland, pat. from 29 Jan 35 (priority of notice in Great Britain is taken into consideration from 13 Mar 35).

DESCRIPTORS: *Milk, *Dehydrated foods, Geometric forms, Cereals, Vegetables, Organic coatings.

PROCEDURE AND ARRANGEMENT FOR REMOVAL OF GLUTEN RESIDUE IN STARCH. [1963] 2p. 1 ref.
Order from OTS or SLA $1.10 63-14796

Trans. of excerpt from German patent 950,780, 18 Oct 56.

DESCRIPTORS: *Starches, *Gluten, Ventilation, Material separation.

The invention involves a procedure for removal of gluten residues in starch by ventilation, characterized in as much that a flowing starch suspension, containing a slight quantity of gluten is treated in the following manner: In several (preferably five) consecutively arranged ventilation chambers, the lower part of which consists of filter stones, and the upper walls of which are graduated and treated from below with finely distributed air pressure, which separates the particles thrown on the surface by the air. (Author)

PROCESS FOR MANUFACTURING OF WHEY POWDER FROM DRY WHEY WITH KEEPING QUALITIES. [1963] 3p.
Order from OTS or SLA $1.10 63-14985

Trans. of German patent 344,450, cl. 53c, gr. 4, issued 24 Nov 21, by Metallurgical Co., Inc., granted 15 May 20.

DESCRIPTORS: *Dehydration, *Preservation, *Powders, *Milk, Dehydrated foods.

PROCESS FOR THE MANUFACTURE OF A CHOCOLATE WHICH REMAINS SOLID AT ELEVATED EXTERNAL TEMPERATURES ESPECIALLY DRY TEMPERATURES. [1963] 3p. 3 refs.
Order from OTS or SLA $1.10 63-14944

Trans. of German patent 744,862, cl. 53f, gr. 2, S150728 IVa/53f, pat. from 6 June 42, issued 25 Nov 43.

DESCRIPTORS: *Cocoa, Heat treatment, *Desiccants, Solids, Temperature, Milk, Dehydrated foods, Melting, Inhibition.

REPORTS ON HYGIENE AND NUTRITION. 23 July 63, 33p. 26 refs. JPRS: 20301.
Order from OTS $1.00 63-31358

Trans. of Voprosy Pitaniya (USSR) 1963, v. 22, no. 3, p. 3-8, 51-55, 90-94.

DESCRIPTORS: *Public health, *Nutrition, *Proteins, Exercise, *Meat, *Antibiotics, Preservation, Storage, Toxicity, *Pesticides, Food, *Vitamins.

Contents:
Protein requirements of man in the process of work, by I. Gontea and others
Hygienic assessment of meat treated with antibiotics to prolong its useful storage time, by Yu. I. Rubinshtein and others
All-Union Scientific Conference on the Hygienic Aspects and Toxicology of Pesticides (no. 2) Kiev, Oct 62, by S. G. Serebryanaya
Adding vitamins to food products in large consumer demand, by I. M. Tsvang.

Avshalumova, A. D.
DETERMINATION OF FRESHNESS OF MEAT BY THE PARTITION CHROMATOGRAPHY ON PAPER [1962] [11]p. 7 refs. FASEB manuscript no. S 332-2.
Order from OTS or SLA $1.60 63-19021

Trans. of Voprosy Pitaniya (USSR) 1962, v. 21, no. 3, p. 22-28.

DESCRIPTORS: *Meat, *Chromatographic analysis, Amino acids, Ammonia, Decomposition.

A quantitative analysis of the decomposition of meat proteins is made to determine the freshness of meat after prolonged storage. The individual amino acids are studied via partition paper chromatography. The procedure is described in detail. Other analytical methods used include bacterioscopy; pH determination; reaction with $CuSO_4$ peroxidase, and formol; and visual fluorescence. The free amino acids as seen in the chromatogram are listed. The presence of threonine and methionine are noted.

Boedcher, Herman Frederik and Heidenstam, Erik Johan von.
IMPROVEMENTS FOR MALTING AND HEATING DRUMS. [1963] 15p. (figs. omitted).
Order from OTS or SLA $1.60 63-14775

Trans. of French patent 929,874, gr. 2, cl. 4, appl. 27 June 46, granted 22 July 47, pub. 9 Jan 48, pat. appl. in Great Britain 3 July 45.

DESCRIPTORS: *Cereals, Heat treatment, Cylindrical bodies, Design, Rotation, Growth.

Bremer, H.
PROCESS FOR THE MAKING OF SOLUBLE ALBUMIN PREPARATIONS FROM MEAT, FLESH MEAL OR PLANT SUBSTANCES RICH IN ALBUMIN. [1963] 6p. 2 refs.
Order from OTS or SLA $1.10 63-14947

Trans. of German patent 108,053, cl. 53, pat. from 15 May 1897, pub. 1 Dec 1899.

DESCRIPTORS: *Albumins, *Meat, *Solubility, *Plants (Botany), *Cocoa, Food, Ammonia.

Bussi, Ernesto.
PRESERVATION OF FOOD MERCHANDISE AND ASSOCIATED PRODUCTS IN THEIR NATURAL CONDITION, SEMI-TREATED AND TREATED, BY MEANS OF SUBSTITUTION OF AIR INSIDE THE PACKAGE OR INSIDE THE SURROUNDINGS OF PRESERVATION, WITH INERT GAS, WITH EVENTUAL ADDITION OF OTHER GASES, VAPORS OR ANTIFOULING, ANTISPORADIC, AND ANTIFERMENTATIVE ESSENCES. [1963] 4p.
Order from OTS or SLA $1.10 63-14945

Trans. of Italian patent 417,939, cl. II, [appl.] 11 Oct 45 [granted] 3 Feb 47.

DESCRIPTORS: Food, *Preservation, Storage, Air, *Helium group gases, Vapors, *Protective treatments, Sporicides, Fermentation, Fouling, Containers.

Eisenhauer, Josef.
METHOD FOR MANUFACTURE OF A COATING COMPOUND FOR THE PURPOSE OF OBTAINING A GLOSSY BROWN COATING AND ALSO FOR PRESERVATION OF THE BAKERY PRODUCTS. [1963] 3p. 3 refs.
Order from OTS or SLA $1.10 63-14941

Trans. of German patent 1,016,654, E 12819 IV a/2C, cl. 2c, appl. 13 Aug 56, pub. of appl. and distribution of interpreting pub. 3 Oct 57.

DESCRIPTORS: *Coatings, *Bakery products, *Preservation, Color, Starches, Dextrins, Pectins.

The invention involves a procedure for manufacture of a coating compound for the purpose of obtaining a glossy brown color and for the preservation of bakery goods, by means of starch with 3 to 10 parts by weight of pectin, 3 to 10 parts by weight of gelantin and 3 to 10 parts by weight of dextrin, all are being mixed in dry condition. (Author)

Hanssen, Ernstgeorg and Florian, Georg.
PROTEIN DISPLACEMENT IN FLOURS BY AIR SIFTING. [1963] 7p. 12 refs.
Order from SLA $1.10 63-14960

Trans. of Die Mühle (West Germany) 1957, v. 94, no. 42, p. 539-540.
Another trans. is available from ATS $7.00 as ATS-84L28G [1958] 6p.

DESCRIPTORS: *Proteins, *Flour, Air, Separation.

A process in described how protein displacements can be obtained in flour by air sifting. The flours are split into a protein-rich fraction and another, containing little protein. By varying the sifter adjustment, flour with a desired protein content can be obtained within certain limits. It is advisable to employ impact granulation before air sifting in order to have more free protein available for the desired protein displacements. (Author)

Kiermeier, F.
INFLUENCING THE KEEPING QUALITIES OF FOODSTUFFS (A PROBLEM OF TECHNICAL BIOCHEMISTRY) (Beeinflussung der Haltbarkeit von Nährmitteln; Eine Aufgabe der Technischen Biochemie). [1963] [20]p. (foreign text included) 37 refs.
Order from SLA $1.60 63-14977

Trans. of Angew[andte] Chem[ie] (West Germany) 1948, v. 60, no. 7/8, p. 175-179.

DESCRIPTORS: Preservation, *Foods, Storage, Quality control, Biochemistry.

Putilin, N. I. and Staritskaya, L. N.
EFFECT OF VARIOUS DIETS ON GASTRIC SECRETION WITH LONG INTERVALS BETWEEN MEALS AND WHEN MEALS ARE TAKEN HAPHAZARDLY. [1962] [11]p. 4 refs. FASEB manuscript no. S 83-2.
Order from OTS or SLA $1.60 63-15988

Trans. of Voprosy Pitaniya (USSR) 1962, v. 21, no. 4, p. 25-30.

DESCRIPTORS: *Diet, *Gastrointestinal system, Stomach, *Secretion, Starvation.

The effect of feeding patterns, long intervals between meals, and a haphazard arrangement of meals on gastric secretion was studied. Long intervals between meals resulted in a lower level of secretion and lower volume, digestive power, and acidity of the gastric juice due to the uneven strain on the stomach's functioning and its subsequent disturbances. Other results include a thick mucus secretion, disappearance of the reflex phase, and signs of dyspepsia. Normal secretion was slowly regained with the return to normal meal intervals. Irregular meals caused no definite trend in the secretory process. Periods of hyper-and hyposecretion, large amounts of mucus, low digestive power of gastric juice, increased acidity, and decreased free HCL were noted. Secretory patterns in the experimental dogs varied from one experiment to another. Indications of chronic hypertrophic gastritis were found in the gastric mucosa. All elements of the peripheral neurous were affected. These findings confirm the view that gastritis may result from prolonged functional changes in the stomach.

Vozar, Libor.
ALUMINUM CONTENT IN AN ORDINARY DIET AND ITS BIOLOGICAL SIGNIFICANCE. [1962] [9]p. 18 refs. FASEB manuscript no. S 324-2.
Order from OTS or SLA $1.10 63-19022

Trans. of Voprosy Pitaniya (USSR) 1962, v. 21, no. 3, p. 28-31.

DESCRIPTORS: *Aluminum, *Diet, Metabolism, *Phosphorus, Food, Cooking devices,

Food products of plant origin in general contain more Al than those of animal origin. Relatively high amounts of Al were found in lentils, peas, mushrooms, and spinach; large quantities were found in flour and rice. The commonly used vegetables contained less Al, but more than fruits. Very low amounts of Al exist in meat and meat products. The largest amount of P was found in meat, and then flour; insignificant amounts were

found in fruits and vegetables. Experiments confirmed that the Al content of food prepared in Al utensils made in Czechoslovakia at least doubles. It was determined that an average diet may contain 160.1 mg of Al. Since a daily dose of 200 mg is harmless, these Al utensils may be safely used; however, they are not recommended for acidic foods. Increased doses of Al in rats affected their metabolism and increased the Al retention; Al accumulated in the liver, brain, and bones. Phosphorus is retained in the spleen and gastric wall. The growth rate of the experimental rats decreased. The solubility of Al compounds was considered in drawing conclusions. Results indicated that an increased intake of Al is undesirable.

Wang, Shih-mu and Tseng, Chao-lun.
THE GLUTAMIC ACID IN PROTEINS AND THE COMMERCIAL CONDIMENT, SODIUM GLUTAMATE. [1963] 31p. 45 refs.
Order from OTS or SLA $3.60 63-14650

Trans. of [K'o Hsüeh] (China) 1933, v. 17, p. 1018-1048.

DESCRIPTORS: *Glutamic acid, *Proteins, *Sodium compounds, Salts, *Condiments, Industrial production, Quantitative analysis, China, Chemical properties, Physical properties, Hydrolysis, Cereals, Seeds, Hydrochloric acid.

Topice include: The discovery of glutamic acid and sodium glutamate; the glutamic acid content of different proteins; the method of preparation of glutamic acid and sodium glutamate; the industrial preparation of sodium glutamate for use as a commercial condiment and its development in Chinese industry; the properties of glutamic acid and glutamic acid hydrochloride; sodium glutamate and the salt of other metals; the quantitative determination of glutamic acid in different proteins; and, the biochemistry of glutamic acid.

Zambrovskii, V. A.
USE OF HYDROCYCLONES IN THE SUGAR INDUSTRY. [29 Sep 59] 10p. (figs. tables omitted) 6 refs.
Order from OTS or SLA $1.10 63-16377

Trans. of Sakhar[naya] Prom[yshlennost'] (USSR) 1958 [v. 32] no. 7, p. 12-17.

DESCRIPTORS: *Carbohydrates, Classification, Purification, Condensation, *Cyclones (Mechanical), Design, Operation.

Zimmermann, Siegfried.
PROCEDURE FOR PRODUCTION OF DRY CANNED GOODS FROM RAW MEAT. [1963] 4p.
Order from OTS or SLA $1.10 63-14934

Trans. of Austrian patent 164,263, cl. 53b, issued 25 Oct 49, registered 18 Oct 45 (21 Feb 44, day of submission to the German Reich Patent Bureau is considered as day of registration) pat. from 15 Mar 49

DESCRIPTORS: *Meat, *Dehydrated foods, Taste, Water, Heat treatment, Fats, Oils, Production.

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

NEW FLEXIBLE METAL TUBE WHICH SERVES AS CONTAINER FOR DOUGHY SUBSTANCES. [1963] 4p. (figs. omitted).
Order from OTS or SLA $1.10 63-14777

Trans. of French patent 725,864, gr. 20, cl. 4, by Roger & Gallet, appl. 6 Nov 31, issued 16 Feb 32, pub. 19 May 32.

DESCRIPTORS: *Pipes, *Containers, Metals, Materials, Design.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 35. 11 July 63, 49p. JPRS: 20132.
Order from OTS $1.50 63-31264

Trans. of Mashinostroenie (USSR) 1963, no. 3, p. 88-90, 93-94; Stroitel'nye i Dorozhnye Mashiny (USSR) 1963 [v. 8] no. 5, p. 18, 30-31; and 19 selected articles from 1963 issues of 12 Russian newspapers.

DESCRIPTORS: *Industrial production, *Machines, *Construction, *Excavators, *Road-building equipment, *Bulldozers, Handling, *Tractors, Electric motors, Employee relations, Management engineering, *Pipelines, Gases, *Chemical industry, Economics.

Contents:
Soviet construction machinery

Road-building machines for 1964
New models of single-bucket loaders, by N. I. Vashets
A new loading bunker, by M. Ya. Zlatopol'skii
Constructional deficiencies in the E-155 excavator, by S. V. Kandyba
New small-sized electric tractor SM-823, by Yu. F. Rozenblat
Management problems in a road machinery plant, by S. Etkalo and P. Karkokha
Problems of the plant director, by V. Kuklev
Construction of the Bukhara-Ural gas pipeline, by I. Kirpichnikov
Sovnarkhoz control of the chemical industry's orders
"On the agenda: chemical machine building"
Stick to your specialized procution, by D. Usatii.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 36. 16 July 63, 37p. JPRS: 20185.
Order from OTS $1.00 63-31293

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 4, p. 39-41; Mashinostroitel' (USSR) 1963, no. 5, p. 11, 20; and 23 selected articles from 1963 issues of 14 Russian newspapers.

DESCRIPTORS: *Industrial production, *Machines, *Construction, Road building equipment, *Hoists, Vehicles, Pneumatic devices, *Pumps, *Excavators, *Electric furnaces, *Earth handling equipment, *Bulldozers, Remote control systems, Filters (Fluid), Design, Automation, Industrial plants, Foundries, Drills, Chipping hammers, Small tools.

Contents:
Power machinery for road construction
Production of a small pneumatic pump -- testing of a radio-controlled cable crane
The "Malyutka" excavator
Crucible furnace IAT-2.5
Semi-trailer scraper D-392, by A. I. Ratner
New motor graders, by L. Loginov and I. Zlobin
A steel "push-pull" machine, by N. Fedorov
A general purpose automatic loader
A rock cutting machine
Gift of the Berdyansk machine builders
The miner's dust collector, by V. Istomin
News Briefs
Equipmdnt for sale
Why the giant rotors are inoperative -- Kramatorsk workers' displeasure is manifest, by I. Mel'nikov
Problems of management in plant automation, by D Shalygin
How the plan concealed reserves, by K. Bel'ferman
Disproportions between foundry shops of Ryazan' plant, by Yu. Matveev
Facilitating the work of fitters
A cold attitude toward hot workshops, by I. Gershovich and S. Gudimenko.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 37. 19 July 63, 7p.
JPRS: 20269.
Order from OTS $0.50 63-31338

Trans. of 28 short articles from 1963 issues of 16 Russian newspapers.

DESCRIPTORS: *Industrial production, *Machines, *Construction, *Hoists, *Maintenance vehicles, Bearings, Tractors, Cargo vehicles, *Drills, Pumps, Heat exchangers, Pneumatic devices, *Industrial relations, Industrial equipment.

Contents:
New products and equipment in the construction equipment industry
Related industries
Complaints against the Novo-Kramatorsk machine building plant
Advertisements.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 59. 28 June 63, 12p.
JPRS: 19956.
Order from OTS $0.50 63-31169

Trans. of Mashinostroenie (USSR) 1963, no. 2, p. 6; Mashinostroitel' (USSR) 1963, no. 4, p. 16-17, 32, 39; Promyshlennost' Armenii (USSR) 1963 [v. 6] no. 2, p. 72; and from Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1963 [v. 17] no. 4; Kommunist, Erevan (USSR) 1963, 28 Apr, p. 5; Pravda Ukrainy (USSR) 1963, 18 Apr; Sovetskaya Latviya (Latvian SSR) 1963, 28 Apr, p. 4.

DESCRIPTORS: *Industrial production, *Industrial equipment, metals, Mechanical working, Material forming, *Metal forming presses, Automatic, Machines, Lathes, Spark machining, *Machine tools, Gears, Cutting tools.

Contents:
Kiev plant develops new automatic lines for crankshaft production
Automatic turret lathes, models 1B112 and 1B118, by V. A. Rusnak
Lusavan plant develops new boring machines
Elektrom-15 electric-spark machine developed
Lusavan boring machines, by S. Avanyan
Universal and special machine tools automatic production line, by I. N. Petrov
Gear cutting semi-automatic machines
New grooving machine -- model 7432
New special machine tools of the Sterlitamakskii plant imeni Lenin, by A. I. Demychevy.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 60. 8 July 63, 5p.
JPRS: 20069.
Order from OTS $0.50 63-31232

Trans. of #Stanki i Instrument (USSR) 1963 [v. 34] no. 5, p. 1-2 (excerpts); and from Zarya Vostoka (USSR) 1963, 8 June, p. 2.

DESCRIPTORS: *Industrial production, *Industrial equipment, *Machine tools, Machine tool industry, *Cutting tools, Pipes.

Contents:
New equipment developed and put into production at a higher rate
New machines at the Kirov plant, by D. Grein.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 61. 15 July 63, 29p.
JPRS: 20177.
Order from OTS $1.00 63-31288

Trans. of 18 selected articles from May-June 63 issues of 10 Soviet newspapers.

DESCRIPTORS: *Industrial production, Metals, Mechanical working, Material forming, *Metal forming presses, *Machines, Electroerosive machining, *Machine tools, Commerce, Grinders, Precision equipment, Broaches, Lathes, Industrial plants, Programming (Computers), Control, Shafts, Slots, Automation, Construction, Cutting tools, Personnel, Maintenance, Scheduling, Management engineering.

Contents:
Electro-erosion machine
Machinery for briqueting metal chips at the Komsomolets machine-tool building plant
Kolomna heavy machine-tool and press-building plant has too many orders, by I. Shakhari
Vil'nyus Komunaras plant machine tools for export abroad
New precision grinding machine built by Vitebsk plant imeni Kirov
Pull-broaching machines built by Minsk machine-tool building plant imeni S. M. Kirov

New universal duplicating lathe built by Kramatorsk machine tool building plant
New jig boring machine with program control
Heavy boring machine assembled at Leningrad plant imeni Sverdlov
Automatic production line for cutting slots in shafts at the Krasnyi Proletarii plant, by V. Ermilov and L. Saksonov
Production of new machines at the Egor'evsk Komsomolets machine-tool building plant, by E. Garanin
The Experimental and Scientific Research Institute of Metal-Cutting Machines
Machine-tool industry in Lithuania
Machine-tool designer Vasilii Grigor'ev
Problems of machine-tool repair, by G. Pikelis
Failure to deliver goods according to contract, by B. Galich and others
Leningrad plant develops smallest cutting tool
Key plant personnel.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 83. 3 July 63, 5p.
JPRS: 20020.
Order from OTS $0.50 63-31203

Trans. of Uchet i Finansy v Kolkhozakh i Sovkhozakh (USSR) 1963 [v. 20] no. 5, p. 46; and from Molod' Ukrainy (USSR) 1963, 14 May, p. 3.

DESCRIPTORS: *Industrial production, *Precision equipment, *Computers, *Television receivers.

Contents:
Supply of comptometers below demand
Production of TV sets in the USSR.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 84. 8 July 63, 18p. 4 refs.
JPRS: 20056.
Order from OTS $0.50 63-31224

Trans. of Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1963 [v. 17] no. 4, p. 56; Promyshlennost' Armenii (USSR) 1963 [v. 6] no. 2, p. 55-59; Svetotekhnika (USSR) 1963 [v. 9] no. 5, p. 19-24.

DESCRIPTORS: *Industrial production, *Precision equipment, *Hygrometers, Automation, Machine tool industry, *Meters, *Fluorescence, *Lighting equipment.

Contents:
New instruments for moisture content determination, by Dzh. Oganesyan
Review of progress of automation in machine building
Comparison of Soviet, Hungarian and British fluorescent lamp-making machinery, by V. V. Fedorov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 86. 9 July 63, 13p.
JPRS: 20090.
Order from OTS $0.50 63-31238

Trans. of 9 selected articles from 1963 issues of 8 Russian newspapers.

DESCRIPTORS: *Industrial production, *Precision equipment, *Telegraph systems, Automatic, Telegraph equipment, *Cathode ray tubes, Television display systems, Maintenance, *Checks, Photographic equipment, *Ultrasonic radiation, *Storage batteries, Traffic, Meters, *Electron microscopes, *Spectrum analyzers, *Nuclear industrial applications, *Radiography.

Contents:
Automatic direct connector telegraph station
Television cathode-ray tube repair
Self-winding men's wristwatch
Faulty photo-flash equipment at Tallin "Norma" plant, by I. Rabinovich
Apparatus for ultrasound treatment, by S. Riskin
New method for the manufacture of hermetically-sealed storage batteries
New traffic counter and regulator developed in Latvia, by Ya. Mushin
Development of electron microscopes and mass-spectrometers at Sumi electron microscope and electro-automation plant
Isotopes and radioactive instruments for service in Central Asian Republics and Kazakhstan, by N. Nazarov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 89. 16 July 63, 34p.
JPRS: 20189.
Order from OTS $1.00 63-31297

Trans. from Ekonomicheskaya Gazeta (USSR) 1963 [no. 13(86)] p. 41; Pravda, Leningrad (USSR) 1962, 16 Dec, p. 2; Pravda, Moscow (USSR) 1963, 31 Mar; Sovetskaya Moldaviya (USSR) 1963, 5 Mar; Zarya Vostoka (USSR) 1962, 18 Dec, p. 2.

DESCRIPTORS: *Industrial production, *Precision equipment, *Repeaters (Transmission systems), Television equipment, *Microminiaturization (Electronics), Personnel management, Research program administration, Electric cables.

Contents:
Low quality of television broadcasts due to shortage of video recorders, by E. Temchin
Microminiaturization of radioelectronic apparatus, by N. Barkanov and B. Tarabrin
Party criticism of television plant imeni Kozitskii, by A. Grebenshchikov
Poor production of Moldavian "Moldavkabel'" cable plant
Shortcomings of the Kutaisi special design bureau, by A. Petrov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 90. 17 July 63, 17p.
JPRS: 20203.
Order from OTS $0.50 63-31303

Trans. of Promyshlennost' Armenii (USSR) 1963 [v. 6] no. 3, p. 72 and 19 selected articles from 1962-63 issues of 14 Russian newspapers.

DESCRIPTORS: *Industrial production, *Precision equipment, *Television receivers, *Computers, Welding, *Electric cables, *Air conditioning equipment, *Lighting equipment, Electrolysis, Water, Photographic equipment, Refrigeration systems, Electric motors, Dentristry, Drills, *Clocks, Ammeters, Voltmeters,

Contents:
Quality of Voronezh-6 television set criticized, by B. Alievskii and others
About the developers of thinking machines, by N. Mateiko
Tbilisi plant dedicated to E. O. Paton, by K. Beruchashvil
Semipalatinsk plant's overproduction, by E. Kim
Expansion of the Elektropribor plant
Construction of experimental pilot production plant planned
Miscellaneous short items.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 92. 18 July 63, 22p.
JPRS: 20225.
Order from OTS $0.75 63-31317

Trans. of 21 selected articles from 1963 issues of 11 Russian newspapers.

DESCRIPTORS: *Industrial production, *Precision equipment, *Laboratory furnaces, Test equipment, *Plastic, *Electrical equipment, *Lighting equipment, Conveyors, Cameras, *Electric relays, Food, Processing, *Electric switches, Glass, Electric insulation, Motion picture cameras, Television receivers, Telegraph equipment, *Computers, *Clocks, *Infrared equipment, Deafness, Earphones, Generators, Electric motors, Furnaces, *Temperature control.

Contents:
New laboratory electric ovens developed at Utena laboratory oven plant
Lithuanian design bureau develops electrical testing equipment, by A. Belyauskas
Plastics increasingly used by Orgeev Elektroarmatura plant, by L. Pavlov
Defective bulbs produced by Erevan electric bulb plant, by R. Grigoryan
New conveyer doubles output of magnetic starters at Tallin Il'marine plant
Photographic device for catching traffic speed violators
New relay to be manufactured at Kedynyai electrical equipment plant
A new device for grape juice purification
New section of assembly shop of Leninakan-instrument-building plant to begin series production of new type of electric switch
New glass insulator for power lines
New ultra-fast motion picture camera designed in Leningrad
Experimental model of a new type ignitron
Defective "Rekord" TV set, by A. Sanukov
A new automatic telegraph station built in Riga
New type computer produced by Vil'nyus calculating machine plant
Penza watch plant increases export of ladie's wrist watches to East Germany and formation of Svetlana electronic instrument-building firm completed
New instrument to aid in treatment of eye diseases
Defective hearing aids produced by Moscow hearing aid plant, by G. Bovan and A. Navrotskii
New types of generators and explosion-proof motors to be produced at Tiraspol' Elektrodvigatel' plant
New paint-drying oven in operation at Moscow experimental electromechanical plant
Tartu instrument-building plant exceeds semi-monthly quota for assembly of heat-control valves.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 93. 19 July 63, 24p.
JPRS: 20239.
Order from OTS $0.75 63-31324

Trans. of Radio, Moscow (USSR) 1963 [no. 5] p. 2, 7-9, 29-32.

DESCRIPTORS: *Industrial production, *Precision equipment, *Television receivers, Electronics, *Microminiaturization (Electronics), *Radio receivers, *Transistors, Conferences.

Contents:
Improved television sets planned
The increasing complexity and miniaturization of radioelectronic equipment, by V. Govyadinov
The "Lastochka" pocket radio receiver, by A. Dormidontov
Seminar discusses ways to improve the external form of everyday radio equipment, by S. Litvinov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 94. 19 July 63, 36p.
JPRS: 20264.
Order from OTS $1.00 63-31337

Trans. of 18 selected articles from 1963 issues of 11 Russian newspapers.

DESCRIPTORS: *Industrial production, *Precision equipment, *Electric furnaces, Industrial equipment, Radio equipment, Semiconductor devices, Kitchen equipment and supplies, *Cold cathode tubes, Discharge tubes, Conferences, Industrial training, Personnel management, *Radioactive isotopes, Meters, *Cameras, Photographic equipment.

Contents:
Offers to buy and sell equipment
Successful operation of electric furnace plant
The instrument shortage in Lithuania, by A. Kokhanov
Consumer electrical goods production in Latvia
Cold-cathode gas discharge tubes -- a development with good long-term prospects, by L. Korablev and N. Kashnikov
Reports on the instrument building conference, by V. V. Karibskii and others
A complaint about duplication of training facilities, by Sh. Sheradze and others
A visit to a semiconductor plant, by V. Gubarev
Disorderly operations at a Zhitomir plant, by M. Malevanii and G. Trefilova
Industrial applications of radioactive instruments, by N. Nazarov
New amateur photographic equipment, by Yu. Shalamov
Miscellaneous short items.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 95. 22 July 63, 13p.
JPRS: 20285.
Order from OTS $0.50 63-31348

Trans. from Leninskoe Znamya (USSR) 1963, 19 Feb, p. 2; Pravda, Leningrad (USSR) 1963, 21 Feb, p. 2; Pravda, Moscow (USSR) 1963, 20 Feb, p. 3-4; Sovetskaya Belorussiya (USSR) 1963, 19 Feb, p. 2; Sovetskaya Litva (Lithuanian SSR) 1963, 21 Feb, p. 3.

DESCRIPTORS: *Industrial production, *Precision equipment, *Clocks, *Radio equipment, Operators (Personnel), Zinc coatings, Pipes, Glass, Television equipment.

Contents:
Improve the quality of production at the Petrodvorets timepiece plant, by M. Abramovich
News and notes from the field of precision equipment, by V. Markov
A 'help wanted" ad for Moscow plant of thermal automatic machines
Automatic galvanizing line developed at Vil'nyus television components plant
Production of glass tubing is improved at the Klin Laborpribor plant
Increase the output of television-set stabilizers in Belorussia, by N. Satarov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 97. 23 July 63, 34p.
JPRS: 20311.
Order from OTS $1.00 63-31363

Trans. of 22 selected articles from 1962-63 issues of 11 Russian newspapers.

DESCRIPTORS: *Industrial production, *Precision equipment, *Clocks, *Lighting equipment, Automation, Industrial plants, *Telephone equipment, *Vacuum cleaners, *Ventilation fans, *Sound reproduction systems, Welding, *Transformers, *Rectifiers, Mercury, *Radio equipment, *Optical equipment, *Optical instruments, *Temperature control, *Balances, Machine tools, Electric motors, Quality control.

Contents:
First Moscow watch-making plant imeni S. M. Kirov awarded first degree diploma
Riga electric bulb plant to produce light-dispersing bulbs, by I. Deeva
Production of telephone equipment to be automated at the Riga "BEF" plant
The production of miniature vacuum cleaners and giant ventilators in the USSR
New type of record-player in production
New type cigarette lighter designed by fancy metal-goods plant no 2, by V. Drozdov
Portable welding transformer designed by the All-Union Scientific Research Institute of Electric Welding Equipment
New high voltage mercury rectifier developed by the Electrotechnical Institute imeni V. I. Lenin
Penza watch-making plant produces first lot of men's shock-proof watches
Petrodvorets watch plant exports 310,000 wristwatches
Leningrad radio-phonograph plant putting out new type of radio-phonograph
Thinnest wristwatch in the world produced by Petrodvorets watch plant
Small-size electrodynamic speakers for portable radios produced by Moscow miniature electric motors plant
Substantial increase in radio production in Latvia
Leningrad optico-mechanical plant produces important astrophysical instruments
Consumer goods exhibited at the All-Union Pavillion of Consumer Goods
Automatic temperature control unit for the preparation of reinforced concrete developed by the Tallin experimental controlling-and-measuring instruments plant
Ultra microscale developed in Leningrad
Voronezh radio parts plant fulfills plan ahead of schedule
Automatic surfacing machine designed by the electric welding institute imeni O. E. Paton
Mechanization of production of precision parts at the Leningrad "Vibrator" plant
Leninakan miniature electric motors plant takes measures to eliminate the output of defective products, by K. Akopyan

Bergfelder, E.
THOUGHTS ON THE PRODUCTION OF COLD-ROLLED SECTIONS. June 63.
Order from BISI £3 10s BISI-3206

Trans. of Bänder, Bleche, Rohre (West Germany) 1961 [no. 2] p. 64-67.

DESCRIPTORS: Production, *Rolling mills, *Machines, *Cold working, Geometric forms, Metal forming presses.

Minin, A. A. and Chefranov, K. A.
EXPERIENCE AND PROSPECTS OF THE INDUSTRIAL USE OF HYDRODRILLS (Opyt i Perspektivy Promyshlennogo Ispolzovaniya Gidroburov). [1962] [19]p. (foreign text included) 9 refs.
Order from OTS or SLA $1.60 62-16439

Trans. of Neftyanoe Khozyaistvo (USSR) 1958, v. 36, no. 2, p. 13-18.

DESCRIPTORS: Well drilling, *Drills, Industrial equipment, Tests.

Zakrzewski, J.
NEW METHODS FOR TESTING GEAR PUMPS USED IN SPINNING. [1962] 37p.
Order from ATS $35.75 ATS-22P60P

Trans. of Politech[nika] Lodz. Zeszyty Nauk[owe] (Poland) 1961, no. 35, Wlokiennictwo, no. 7, p. 3-44.

DESCRIPTORS: Test methods, *Pumps, *Gears, *Metal spinning, *Rotary pumps.

Engines and Propulsion Systems

Gutovskii, M. V., Popov, Yu. A., and Lebedev, N. V.
CALCULATION OF DISCHARGE REPETITION FREQUENCY IN ELECTRICAL IGNITION SYSTEMS [AND] A METHOD FOR CALCULATING COMPONENTS OF A HIGH-FREQUENCY ACTIVATING CIRCUIT.
4 Apr 63 [50]p. FTD-TT-63-145.
Order from OTS or SLA $4.60 63-19492

Unedited rough draft trans. of [Aviatsionnyi Institut, Moscow. Trudy (USSR) 1962, v. 145] p. 60-98.

DESCRIPTORS: *Ignition systems, *Electric igniters, *Electric discharges, Determination, High frequency, *Actuators, *Oscillators, *Capacitors, Inductance, Dielectric properties, Jet engines.

Kaplyanskii, A. E.
THE PROBLEM OF ELECTRON JET ENGINES AND THE DIRECT CONVERSION OF HEAT ENERGY INTO ELECTRIC (FROM DATA IN THE FOREIGN PRESS). 4 Apr 63 [22]p. 4 refs. FTD-TT-63-298.
Order from OTS or SLA $2.60 63-19408

Unedited rough draft trans. of Elektrichestvo (USSR) 1962, no. 11, p. 7-13.

DESCRIPTORS: *Electric propulsion, *Jet propulsion, Space propulsion, Propulsion, *Energy conversion, Plasma physics, Magnetohydrodynamics, Generators, Electrons, *Jet engines, Ion engines, Plasma engines, Thermoelectricity.

Topics include: Direct conversion of heat energy into electric; long space flights; electron jet engines; classification of electron jet engines and new-type generators; electrothermal jet engines; magnetoplasma machines; and, electron ion machines.

Transport, Traction and Hoist Facilities

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRY NO. 36. 2 July 63, 14p.
JPRS: 19987.
Order from OTS $0.50 63-31182

Trans. of 14 selected articles from 1962-63 issues of 10 Russian newspapers.

DESCRIPTORS: *Industrial production, *Automotive industry, Refrigeration systems, Errors, *Passenger vehicles, Commerce, Personnel, *Hoists, Towing vehicles, *Tractors, *Motorcycles, *Snow vehicles, Cargo vehicles, Trailers, Automation, Machine tools, Bearings, *Internal combustion engines.

Contents:
Quality control chief admonished for faulty refrigerator
Buses for Cuba
Plant directors noted
The Volga M-21st taxi undergoes testing, by Yu. Sudakov
Slow progress at the Lyubertsi plant, by S. Popov
Plant imeni Likhachev pledges above-plan refrigerator production, by A. Usakovskii
Belorussian plant lauded for its BelAZ-531
Riga Sarkana Zvaigzne plant produces new motorcycle
Gorkii institute develops new cross-country motor vehicle
Zil products sent to Cuba
Tandem trailer truck with 65-ton load capacity
A new Kutaisi truck-tractor, by M. Gvelesiani
The course of automation, by R. Fedorova
New technology for the Zil plant, by V. Apatov and N. Ushatikov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRY NO. 37. 5 July 63, 8p.
JPRS: 20035.
Order from OTS $0.50 63-31209

Trans. of Sel'skii Mekhanizator (USSR) 1963, no. 5, p. 22-23; and from Leninskaya Smena (USSR) 1963, 18 May, p. 63; Sovetskaya Latviya (USSR) 1963, 16 May, p. 2; Ekonomicheskaya Gazeta (USSR) 1963, no. 21[94] p. 48; Pravda, Moscow (USSR) 1963, 7 May; 15 May.

DESCRIPTORS: *Industrial production, Automotive industry, *Cargo vehicles, *Towing vehicles, *Passenger vehicles, Ice, *Trailers, Conferences.

Contents:
Gor'kii motor vehicle plant trucks, by B. Shikhov and A. Chernomashentsev
An icebreaker vehicle
A new bus of the Kurgansk bus plant
A want ad
A new truck train
Conference of Motor Vehicle Industry Technicians, Moscow.

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRY NO. 38. 10 July 63, 11p.
JPRS: 20115.
Order from OTS $0.50 63-31254

Trans. of Avtomobil'nyi Transport (USSR) 1963 [v. 41] no. 4, p. 48 and 12 selected articles from 1963 issues of 7 Russian newspapers.

DESCRIPTORS: *Industrial production, *Automotive industry, *Cargo vehicles, Towing vehicles, *Trailers, Vehicle chassis components, Plastics, Automation, Industrial plants, *Tractors, Maintenance, Logistics, Hoists.

Contents:
Minsk plant develops new Tandem trailer dump truck, by N. Karnolenko
A plastic motor vehicle, by V. Drozdov
Automatic production at Minsk bearing plant
Aid to agriculture by Vil'nyus automotive repair plant
Supply delays to Mogilev hoist-transport equipment plant
New Belorussian heavy dump trucks
9,000,000th bicycle produced
Testing of new Belorussian dump trucks nearing completion.

Albrekht, V. A., Pershin, S. P., and Shulga, V. A.
WIDER UTILIZATION OF CONTINUOUS-WELDED TRACKS. [1963] [7]p.
Order from OTS or SLA $1.10 63-16471

Trans. of Zheleznodorozhnyi Transport (USSR) 1962 [v. 44, no. 5] p. 43-47.

DESCRIPTORS: *Railroad tracks, *Welding, Manufacturing methods, Railroads.

Burak, M.
BARGES WITH TELESCOPIC TENT COVERING. 25 Mar 63 [5]p. FTD-TT-62-1519. AD-402 440.
Order from OTS or SLA $1.10 63-19487

Unedited rough draft trans. of Rechnoi Transport (USSR) 1961 [v. 20] no. 12, p. 29.

DESCRIPTORS: *Barges, *Tents, *Protective coverings, Design.

Several deck barges with a load lifting capacity of 800 tons were equipped with tent installations with movable telescopic blinds. The construction of the canopies offers the possibility of simultaneously uncovering about 50% of the space over the freight compartments and load or unload the vessel by two harbor cranes, which considerably reduces the time of standing under load and the unloading time. Detals are given of the tent assembly.

Daubertes, C., Beuret, J. and others.
APPLICATION OF THE LOCATI METHOD FOR TESTING THE FATIGUE LIMITS OF AUTOMOBILE PARTS. June 63.
Order from BISI £4 5s BISI-3238

Trans. of Revue de Métallurgie (France) 1960, v. 57 [no. 4] p. 337-346.

DESCRIPTORS: *Vehicle chassis components, *Fatigue (Mechanics), Automotive industry, Control systems, Test equipment.

Kazarnovskii, D. S.
WAYS OF SOLVING THE RAIL PRODUCTION PROBLEM, tr. by J. H. Dixon. Mar 59 [14]p. [BISI] Trans. 1246; [Trans.] no. 5162; [DSIR] NLL M.4583.
Order from OTS or SLA $1.60 62-24225

Trans. of Stal' (USSR) 1958 [v. 18, no. 2] p. 138-144.

DESCRIPTORS: *Industrial production, *Railroad tracks, Steel, Carbon alloys, Hardening, Heat treatment, Stresses, Design, Lubrication.

The following improvements in rail production were recommended: (1) industrial verification of the efficacy of surface hardening the heads of carbon steel rails along their whole lengths with heat treatment, (2) organization of the manufacture of steel rails for laying on curved sections of track, (3) normalization of Bessemer steel rails, and an increase to 0.75% in their carbon contents, (4) reduction in stresses caused by cold leveling of rails, (5) increase in production of 25-meter rails, and (6) selection of the optimum ingot weight and method of deformation for producing heavy section rails. Suggested improvements of operating conditions for rails included: (1) solving the problem of the shape of head for type R-50 rails and of the head corner radii, (2) reducing the number of curved sectors and increasing curve radii on the principal freight-carrying lines, (3) laying of parallel tracks in sectors with high freight densities, (4) establishing optimum rail inclination on curved sectors and optimum raising of the outer rails at curves, (5) lubricating the lateral working faces of the outer rails at curves, and (6) improving the angle at which electric and diesel engine bogies enter small-radius curves.

Sun, Tse-yun.
LOW ALLOY RAILS WITH INCREASED SILICON CONTENT FOR CHINESE RAILROADS. 26 June 63, 6p. JPRS: 19882.
Order from OTS $0.50 63-31131

Trans. of Organisation für die Zusammenarbeit der Eisenbahnen. Zeitschrift (Poland) 1963, no. 2, p. 20-22

DESCRIPTORS: *Railroads, *Railroad tracks, Steel, Carbon alloys, Manganese alloys, Silicon alloys, Mechanical properties.

Zaidman, N.
A SHORT HISTORY OF THE MOSKVICH (THE MOSKVICH GATHERS POWER). USSR Industrial Development: Soviet Automotive Industry no. 35. 27 June 63, 2p. JPRS: 19912.
Order from OTS $0.50 63-31143

Trans. of Sel'skii Mekhanizator (USSR) 1963, no. 4, p. 29

DESCRIPTORS: *Industrial production, *Automotive industry, *Passenger vehicles.

INSTRUMENT FOR OBTAINMENT OF PRODUCTS IN GRANULATED FORM. [1963] [4]p.
Order from OTS or SLA $1.10 63-14778

Trans. of French patent 717,232, gr. 5, cl. 5, by Instruments and Evaporators KESTNER, appl. 18 May 31, delivered 19 Oct 31, pub. 5 Jan 32.

DESCRIPTORS: *Materials, *Spheres, *Particles, Plastics, Cylindrical bodies, Rotation.

Permyakov, V. M. and Zhurablev, V. F.
ON DOLOMITE CEMENT. [1963] 3p. 7 refs.
Order from OTS or SLA $1.10 63-16137

Trans. of [Zhurnal Prikladnoi Khimii] (USSR) 1943, v. 16, no. 7/8, p. 253-257.

DESCRIPTORS: *Cements, *Dolomite, Standards, *Binders.

Dolomites of the upper-Kazan layer of the bed on the right side of the Volga near village Petchishi can be used for the production of dolomite cement of a quite satisfactory quality. The optimum temperature of calcination of the dolomite in order to produce dolomite cement is about 800 ± 20°C. The cement from dolomites of the bed near the village Petchishi belongs to the type of local binding materials; it fully responds therefore to the requirements of the standard on local binding materials. Dolomite cement is a calcareous-magnesia binding substance with a somewhat higher resistance to the action of water. (Author)

Yamaura, Ryozo and Miyata, Akira.
METHOD OF MANUFACTURING MAGNETIC POWDER FOR MAGNETIC RECORDING. [1963] 7p.
Order from OTS or SLA $1.10 63-16316

Trans. of Japanese patent publication SHO 38-831, 8 Feb 63 (appl. SHO 35-10,544. 29 Mar 61) by The Broadcasting Corp. of Japan.

DESCRIPTORS: *Magnetic tape, Magnetic materials, Powders, *Cobalt compounds, *Ferrites, Manufacturing methods, *Antioxidants, Aldehydes.

The patent involves a method of manufacturing magnetic powder by coupling a small amount of cobalt oxide with iron oxide. Such low aldehydes as formalin, acetoaldehyde, etc. are mixed and added to a mixed aqueous solution of ferrous salt and a small amount of cobalt salt; to this mixture a mixed solution of an oxidizing agent and alkali is added; the oxidization of cobalt is prevented while the solution is made to react by heating in such a manner as to produce $CoO.n(FeO_3.Fe_2O_3)$ with the cobalt remaining bivalent; then this product is roasted at a low temperature between about 250 and 300°C into a cobalt ferrite magnetic powder which is apparently $CoO.nFe_2O_3$ (molar ratio n = from 8 to 24).

Adhesives and Sealants

Miyahara, Jusei, Hirano, Katsuaki and others.
METHOD OF PASTING POLYVINYL ALCOHOL PLASTICS. July 63, 7p. 1 ref.
Order from SA $16.00 SA Code-P-113

Trans. of published Japanese patent 13221/1960, cl. 24-J-01 (24-J-6) (24-H-3) appl. no. 22740/1958 [filed] 12 Aug 58, pub. 12 Sep 60, by Kurashiki Rayon Co., Ltd.

DESCRIPTORS: *Adhesives, *Zinc compounds, Chlorides, Organic solvents, Methanol, Ethanol, Acetone, Plastics, *Polyvinyl alcohol.

Otani, Masatomo and Mizukami, Yasutoshi.
METHOD FOR ADHESION OF POLYETHYLENE SHEET TO METAL, WOOD, FIBER AND OTHER MATERIALS. July 63, 7p. 1 ref.
Order from SA $16.00 SA Code-P-167

Trans. of published Japanese patent 5561/1962, cl. 24-J-01 (24-J-64) (25-N-222) appl. no. 5879/1959 [filed] 24 Feb 59, pub. 22 June 62, by Nichirin Gomu Kogyo Co., Ltd.

DESCRIPTORS: *Adhesives, *Rubber, *Synthetic rubber, *Phenolic plastics, *Plastic films, *Polyethylene plastics, *Butenes, Adhesion, Metals, Wood, Fibers.

Otani, Masatomo, and Mizukami, Yasutoshi.
METHOD FOR ADHESION OF POLYPROPYLENE TO METAL, WOOD, FIBER AND OTHER MATERIALS. July 63, 7p.
Order from SA $16.00 SA Code-P-170

Trans. of published Japanese patent 6132/1962, cl. 24-J-01 (24-J-04) (25-N-222) appl. no. 26871/1959 [filed] 20 Aug 59, pub. 27 June 62, by Nichirin Gomu Kogyo Co., Ltd.

DESCRIPTORS: *Adhesives, *Rubber, *Synthetic rubber, *Phenolic plastics, *Plastic films, *Polyethylene plastics, Propenes, *Butenes, Adhesion, Metals, Wood, Fibers.

Ceramics and Refractories

Budnikov, P. P., Berezhnoi, A. S. and others.
TECHNOLOGY OF CERAMICS AND REFRACTORIES, CHAPS. 12-13: SELECTED PARTS. 18 Apr 63 [81]p. 40 refs. FTD-TT-63-104.
Order from OTS $2.25 63-11658

Unedited rough draft trans. of mono. Tekhnologiya Keramiki i Ogneuporov, Moscow, 1962, p. 374-396, 400-409, 421-429.

DESCRIPTORS: *Ceramic materials, *Refractory materials, Manufacturing methods, Heat treatment, Sintering, *Furnaces, Material forming, *Crucibles, Nuclear properties, *Aluminum compounds, *Beryl-

lium compounds, *Magnesium compounds, *Calcium compounds, *Zirconium compounds, Oxides, *Thorium compounds, *Uranium compounds, Dioxides, *Cements, Molding materials, Binders, Fillers, *Refractory coatings, *Cermets, Carbides, Borides, Nitrides, Silicides, Crystal structure, Melting

Contents:
Highly-refractory materials and pure oxide products
Refractory mortars, pastes and castables
Cermets

Pavlushkin, N. M.
SINTERED CORUNDUM. 18 Apr 63 [305]p. 361 refs.
FTD-TT-62-912; AD-402 580.
Order from OTS $5.00 63-11656

Unedited rough draft trans. of mono. Spechennyi Korund, Moscow, 1961, 214p.

DESCRIPTORS: *Synthetic stones, Aluminum compounds, Oxides, *Corundum, *Sintering, *Refractory materials, *Electric insulation, *Crucibles, Ceramic coatings, Powders, Crystallization, Density, Mechanical properties, Tensile properties, Compressive properties, Hardness, Thermal conductivity, Thermal expansion, Thermal stresses, Shock resistance, Electrical properties, Chemical properties, Bibliographies

Contents:
Aluminum oxide
Forms of artificial corundum
Special characteristics of the technology of sintered corundum
Properties of sintered corundum

Skornyakov, M. M.
MAT ETCHING OF GLASS ARTICLES (Matovoe Travlenie Steklyannykh Izdelii). [1962] [6]p. (foreign text included).
Order from OTS or SLA $1.10 62-14899

Trans. of Legkaya Promyshlennost' (USSR) 1955 [v. 15] no. 9, p. 43-44.

DESCRIPTORS: *Photoengraving, *Glass, *Varnishes.

Fuels, Lubricants, and Hydraulic Fluids

HYDROCARBON-OXIDIZING AND SULFATE-REDUCING BACTERIA: COMPILATION OF ABSTRACTS. Rept. 23 on Work Assignment 28. 10 May 63 [4]p. AID Rept. P-63-59. AD-404 908
Order from OTS or SLA $1.10 63-19577

Abstract trans. of Mikrobiologiya (USSR) 1963, v. 32, no. 1, p. 33-38, 121-126, 128-135.

DESCRIPTORS: *Abstracts, *Bacteria, *Hydrocarbons *Sulfates, Oxidation, Reduction (Chemistry), *Jet engine fuels, *Petroleum.

The four abstracts comprising this report represent information indirectly relevant to the production and handling of Soviet jet fuels.

SODIUM ELECTROLYSIS. 21 Sep 48, 3p.
Order from OTS or SLA $1.10 63-10961

Trans. from unidentified German mono. pub. by I. G. Farbenindustrie A.G., Frankfurt, a.M., n.d. (PB-73504B).

DESCRIPTORS: *Sodium, Electrolysis, *Electrolytic cells, Design, Operation, *Lead compounds, Ethyl radicals, *Fuel additives, Antiknock, Preparation.

Organov, K. A., Makovskii, S. A., and Kosarev, N. N.
ONCE MORE ON A MOVING COMBUSTION CENTER IN A POROUS RESERVOIR MEDIUM. [1962] 14p. 12 refs.
Order from OTS or SLA $1.60 63-10212

Trans. of Neftyanoe Khoz[yaistvo] (USSR) 1960, v. 38, no. 4, p. 14-20.

DESCRIPTORS: Porosity, *Porous materials, *Petroleum, *Combustion, Combustion chambers, *Thermal conductivity, Motion, Velocity, Numerical analysis.

In order to study the possibility of extraction of residual low-viscosity petroleum by the creation and movement of a combustion center in a porous medium, investigations were made under laboratory conditions in which a certain quanity of supplementary fuel in the form of a gas-air mixture was injected into a porous medium saturated with non-coking crude oils and ingnited. These investigations were carried out on models (illustrations are included) filled with sand with a porosity of 28 to 32% and a permeability of 1.5 to 3 Darcy. The results of the investigation permit the approximate calculation of the process of movement of the combustion center under reservoir conditions. It was established that with the combustion of methane-air mixtures of various concentrations the combustion center moves in the direction of filtration as well as in the opposite direction, and the velocity of motion of the combustion center is a direct function of the quanity of mixture injected and the latter depends on the physical parameters of the petroleum reservoir and in the first place on the permeability.

Sklyar, V. T., Sabirova, G. V. and others.
PROPERTIES OF HORIZON IV ANASTASIEVSKAYA CRUDE: PRODUCTION OF KhF-12 FREON OIL FROM ANASTASIEVSKAYA CRUDE: STUDY AND COMMENT. Rept. no. 20 on AID Work Assignment no. 28. 28 Mar 63 [3]p. AID rept. P-63-44. AD-401 768.
Order from OTS or SLA $1.10 63-19216

Abstract trans. of mono. Neftepererabotka, Kiev, 1962, p. 48-57.

DESCRIPTORS: *Fuel oils, *Hydrocarbons, Refineries, Chemical properties, Petroleum, *Refrigerants, Jet engine fuels.

The article reported is indirectly related to the technology of Soviet jet fuels inasmuch as it contains some useful data on Horizon IV Anastasiyevskaya crude, a possible source of T-5 fuel. The article deals mainly with the possibilities and means of producing a good KhF-12 freon refrigeration oil from the oil fractions of the crude. (AID comment)

Tarasov, B. and Popova, N.
ON THE CONDENSATION OF HYDROCARBONS UNDER THE ACTION OF SULFURIC ACID. [1963] 4p.
Order from OTS or SLA $1.10 63-14087

Trans. of Neftyanoe Khozyaistvo (USSR) 1930, v. 18, no. 2, p. 260-261.

DESCRIPTORS: *Gasoline, Hydrocarbons, *Sulfuric acid, *Condensation reactions, Benzenes, Anilines, Pyrolysis, Chemical analysis, Polymerization.

Vorberg, G.
CONTRIBUTION TO THE TESTING AND EVALUATION OF DIESEL MOTOR FUELS IN THE LABORATORY: MOTOR-TECHNICAL DATA (SELECTED PARTS). [1963] 8p.
Order from SLA $1.10 63-14823

Partial trans. of Brennstoff-Chemie (West Germany) 1950, v. 31, p. 143-145, 148.

DESCRIPTORS: *Fuel oil, Ignition, Test methods, Diesel engines.

Contents:
Ignitibility
Miscibility and storability
Summary.

Widmaier, O. and Nenninger, L.
DEVELOPMENT AND SIGNIFICANCE OF TETRAETHYLLEAD AS AN ANTIKNOCK AGENT. 23 Feb 48, 40p. 302 refs.
Order from SLA $3.60 63-14293

Trans. of [Technische Hochschule, Stuttgart. Forschungsinstitut für Kraftfahrwesen und Fahrzeugmotoren. Berichte] (Germany) 1942, v. 9, p. 109-121

DESCRIPTORS: *Lead compounds, *Ethyl radicals, Fuel additives, Antiknock, Synthetis (Chemistry), Quantitative analysis, Physiology, Bibliographies.

Contents:
Introduction and significance of tetraethyllead as an antiknock agent
Historical review
Preparation of tetraethyllead
Forms in which tetraethyllead is used
Use of tetraethyllead as an antiknock agent
Physicochemical properties of tetraethyllead
Physiological effects of tetraethyllead
Detection and determination of tetraethyllead
Summary
Bibliography

Leather and Textiles

DEVELOPMENT OF THE WINDING MACHINE FOR SYNTHETIC FIBER PRODUCTION. [1963] 3p. (figs. omitted).
Order from SLA $1.10 63-18021

Trans. of Chemiefasern (West Germany) 1962 [v. 12] no. 6, p. 398-401.

DESCRIPTORS: *Fibers (Synthetic), Production, *Drawing (Machine processing), Reels, Industrial equipment.

PROCESS FOR SPINNING FROM MELTS. [1963] 5p.
Order from OTS or SLA $1.10 63-16324

Trans. of Belgian patent 613,292, filed 30 Jan 62 (British priority 30 Jan 61) by Imperial Chemical Ind., Ltd.

DESCRIPTORS: *Fibers (Synthetic), Extrusion, *Polyester plastics, Ethylenes, *Phthlates, Additives, *Silicones, Methyl radicals.

A process for the production of threads spun from melts which have an improved quality is described. The threads are made of polyesters of aromatic dicarboxylic acids, The polyesters are melted and extruded through a die. The melted polymers, before extrusion do not contain more than 0.5% of a stable, inactive, incompatible substance with a high boiling point. The stable, inactive, incompatible substance is a dimethylpolysiloxane which is present in a quantity of 0.05 to 0.2%. The polyester of an aromatic dicarboxylic acid is polyethylene terephtalate.

Chabert, F.
PROCESS FOR IMPREGNATION OF OPEN OR CLOSED TEXTILE FIBRES. [1963] [2]p.
Order from OTS or SLA $1.10 63-16012

Trans. of French patent 683,946, n.d.

DESCRIPTORS: *Fibers, *Textiles, Impregnation, *Moistureproofing.

Gakel', P. A. and Kovyazina, L. E.
PRODUCTION OF BULKED YARN BY STAPLING ROPES OF SYNTHETIC FIBRE (Proizvidstvo Obemnoi Pryazhi Shtapelirovaniem Zhguta Sinteticheskikh Volokon) tr. by B. Ribush. [1962] [18]p. (foreign text included). [CSIRO] Trans. no. 5872.
Order from OTS or SLA $2.60 63-15265

Trans. of Tekstil'naya Promyshlennost' (USSR) 1961, v. 21, no. 11, p. 35-41.

DESCRIPTORS: *Fibers (Synthetic), Fibers, *Cordage, Production.

Bulked yarn was manufactured according to the following steps. The extruded fibers passed through a stapling machine where they were stretched in the zone of gentle heating and stapled in the breaking zone; next they passed through a "crimping" device and were collected. About half of this high-shrinkage fiber entered a steaming chamber to produce a low-shrinkage fiber. (Fibers of different shrinkage properties are necessary to produce bulked yarn.) The slivers then entered a breaking and blending machine. The blend of fibers was processed on a shortened worsted spinning machine to twisted yarn, wound into skeins, and steamed in the setting machine or dyed with boiling. The heat contracted the high-shrinkage fibers which forced the low-shrinkage fibers to shift and bend: this increased the diameter or bulk of the yarn.

Gusev, V. E.
SELECTION OF THE LENGTH OF STAPLE FIBRE FOR BLENDING WITH WOOL (Vybor Dliny Shtapel'-nogo Volokna pri Pererabotka Ego s Sherst'yu) tr. by B. Ribush. [1962] [15]p. (foreign text included) 2 refs. [CSIRO] Trans. no. 5873.
Order from OTS or SLA $1.60 63-15307

Trans. of [Tekstil'naya Promyshlennost'] (USSR) 1961, v. 21, no. 11, p. 41-46.

DESCRIPTORS: Size, *Fibers, *Woolen textiles, Surface properties, Mechanical properties, Textile industry.

In choosing the length of staple fiber, the following factors must be considered: the breed of sheep, quality and length of the fiber, and the combing and spinning processes. The length distribution of the fiber must be studied, and a determination made of its average length, of the mean square deviation, of the coefficient of variation, and of the size of the "base" (the specific weight of the five largest contiguous classes in per cent of the total weight). A recommended fiber length for worsted spinning was determined. It is more important to use staple fibers of varied length when they are carded separately than when they are combed together As the staple fiber length increased, the yarn became stronger in static and dynamic tests.

Hirokawa, K. and Imai, M.
DRY SPINNING OF MAN-MADE FIBERS. [1963] 3p.
Order from ATS $5.50 ATS-79Q69J

Trans. of Japanese [published] patent 609 (1953) appl. filed 10 Oct 51, appl. 13,485, by Shin Nippon Chisso Hiryo (New Japan Nitrogen Fertilizers) Co., Ltd., Osaka, pub. 16 Feb 53.

DESCRIPTORS: *Fibers(Synthetic), *Textiles.

Krainova, K. M. and Lomako, A. V.
NEW PROCESS FOR CLEANING STEEL SPINNING SPINNERETS. [1963] 2p.
Order from ATS $2.00 ATS-12Q70R

Trans. of Khim[icheskie] Volokna (USSR) 1961, no. 3, p. 68.

DESCRIPTORS: *Steel, Cleaning, Textiles.

Mencikova, J. and others.
PROCESS FOR THE PRODUCTION OF POLY-PROPYLENE FOR FIBERS. [1963]
Order from TTIS $7.20 TTIS NS-90

Trans. of East Geman patent 24,672, appl. 11 Jan 60, pub. 15 Feb 62.

DESCRIPTORS: *Propenes, Polymers, Snythesis (Chemistry), *Fibres (Synthetic).

Mizonov, E. D.
DEVICE FOR DETERMINING THE TENSION OF THE YARN BETWEEN THE TRAVELER AND BOBBIN. [1963] 4p. (figs. omitted).
Order from OTS or SLA $1.10 63-16978

Trans. of Tekstil'naya Promyshlennost' (USSR) 1958, v. 18, no. 1, p. 25-27.

DESCRIPTORS: *Fibers, Stresses, Tensiometers, Textiles.

Nakashige, Satoo, Yuyama, Shuji, and Nakajima, Ei.
A PROCESS FOR THE PREPARATION OF WELL DYEABLE MOLDINGS OF PROPYLENE POLYMER. July 63, 7p.
Order from SA $16.00 SA Code-P-156

Trans. of published Japanese patent 20376/1961, cl. 25-H-O (42-D-2) appl. no. 39328/1959, filed 18 Dec 59, pub. 25 Oct 61, by Fuji-Boseki Co.

DESCRIPTORS: *Fibers (Synthetic), *Polyethylene plastics, *Propenes, Additives, *Carboxylic acids, Esters, *Propanes, Phenyl radicals, Oxides.

Ozawa, Sanshiro and Takahashi, Ryokichi.
METHOD OF DYEING POLYOLEFINE FIBERS. July 63, 5p.
Order from SA $16.00 SA Code-P-119

Trans. of published Japanese patent 14421/1962, cl. 42-D-21 (48-B-02) (25-H-311) appl. no. 22768/1960 filed 28 Apr 60, pub. 19 Sep 62, by Mitsui Chemical Industries Co., Ltd.

DESCRIPTORS: *Fibers (Synthetic), *Polyethylene plastics, Additives, *Propanes, Phenyl radicals, Oxides, Phenols, Benzenes, Naphthalenes, *Dyes.

Syritskaya, O. S.
SOME ASPECTS OF THE DEFORMATION OF KNIT-WEAR (Nekotorye Osobennosti Deformatsii Trikotazha) tr. by B. Ribush. [1962] [12]p. (foreign text included). [CSIRO] Trans. no. 5874.
Order from OTS or SLA $1.60 63-15973

Trans. of [Tekstil'naya Promyshlennost'] (USSR) 1961, v. 21, no. 11, p. 72-76.

DESCRIPTORS: Deformation, *Clothing, Textiles, Fibers, *Cotton textiles, Elasticity, Structural properties, Mechanical properties.

Deformation of knitted fabric is governed by the structure and parameters of the loops. In stretching to the permissible pitch (A_{perm}), the height of the row of loops of doubleknit fabric approaches its lowest value with decreasing length of the loops and lower yarn count.

The load on one loop varies as the fabric is stretched to A_{perm}: it is greater when the loops are shorter and the yarn count lower. The difference in loads is greater when strips are tested. The ratio of the loads upon stretching to loop pitch A_{perm} to the load at break increases with decreasing length of the loops and lower yarn count. The ratio of the permissible loop pitches and pitches at break varies similarly to that of the loads but to a lesser extent. These investigations were made on only certain patterns of knitwear and are therefore limited.

Takagi, R. and Uchiyama, H.
METHOD FOR THE MANUFACTURE OF HOLLOW ACETATE ARTIFICIAL FIBERS. [1963] 4p.
Order from ATS $8.00 ATS-80Q69J

Trans. of Japanese [published] patent 814 (1952) appl. filed 29 May 50, pat. appl. 6951, by Shin Nippon Chisso Hiryo (New Japan Nitrogen Fertilizers) Co., Ltd., Osaka, pub. 7 Mar 51.

DESCRIPTORS: *Fibers (Synthetic), *Textiles, *Acetates, Manufacturing methods.

Paints and Finishes

THE FREEZE-AND-THAW RESISTANCE OF POLY (VINYL ACETATE) EMULSION PAINTS. [1963] 7p.
Order from ATS $10.50 ATS-19Q70DU

Trans. of Verfkroniek (Netherlands) 1956, v. 29, no. 4, p. 108-110.

DESCRIPTORS: *Plastic paints, Vinyl plastics, Acetal plastics, Freezing, Physical properties.

Bobyrenkyo, Yu. Ya. and others.
A RAPID METHOD FOR THE DETERMINATION OF THE DISPERSION COMPOSITION OF THE TITANIUM DIOXIDE PIGMENT. [1963].
Order from TTIS $12.00 TTIS NS-104

Trans. of Lakokrasochnye Materialy [i Ikh Primenenie] (USSR) 1962, no. 6, p. 52-53.

DESCRIPTORS: *Titanium compounds, *Dioxides, *Pigments, Distribution, Paints.

Ermolaeva, T. A. and others.
THE EFFECT OF MODIFYING RUTILE TITANIUM DIOXIDE ON ITS WETTABILITY WITH LINSEED OIL AND WATER. [1963]
Order from TTIS $18.00 TTIS NS-103

Trans. of Lakokrasochnye Materialy [i Ikh Primenenie] (USSR) 1962, no. 6, p. 20-23.

DESCRIPTORS: *Titanium compounds, *Dioxides, *Linseed oil, Water, Surface properties, Paints.

Kalauch, C.
THE INFLUENCE OF PIGMENT MATERIALS ON THE CORROSION PROTECTION EFFECT OF PAINTS (Der Einfluss von Pigmentstoffen auf die Korrosionsschutzwirkung von Anstrichen). [1963] [20]p. (foreign text included) 12 refs.
Order from SLA $1.60 63-16831

Trans. of Werkstoffe und Korrosion (West Germany) 1950, v. 1, no. 10, p. 400-404.

DESCRIPTORS: *Paints, *Corrosion inhibition, Materials, *Pigments, Chemical analysis, Iron, Steel.

The author analyzes conditions at the paint/metal interface on the basis of local cell potentials under various conditions of pH, on the assumption that the film-forming material will have a selective permeability for anions or cations. By using the film-forming vehicle as a membrane in dialysis and electro-dialysis tests he demonstrates that for corrosion resistance on iron or iron base alloys, the film-former should be selectively permeable to anions and the pigment basic in reaction. Organic bases, (such as the nitrogen bases used as pickling inhibitors) have an added protective effect through their formation of an electrostatically held layer about the anode which decreases the solution potential for the underlying metal in each local cell. (Author)

Krahmer, W. and others.
PROCESS FOR STRIPPING A THIN LACQUER FILM FROM A CARRIER FOIL FOR THE PRODUCTION OF WOUND CONDENSERS. [1963].
Order from TTIS $5.00 TTIS NS-108

Trans. of East German patent 24,895, appl. 6 July 60, pub. 18 Mar 63.

DESCRIPTORS: *Varnishes, *Films, Foils, Production, Capacitors, *Electric insulation.

Labutin, A. L.
AN IMPROVED APPLICATOR FOR THE PREPARATION OF FILMS OF UNIFORM THICKNESS. [1963].
Order from TTIS $2.70 TTIS NS-107

Trans. of Lakokrasochnye Materialy [i Ikh Primenenie] (USSR) 1963, no. 1, p. 72.

DESCRIPTORS: *Films, Preparation, Thickness, Paints.

Malevynnyi, V. A.
THE COLORIMETRIC DETERMINATION OF THE ALUMINIUM CONTENT IN THE TITANIUM DIOXIDE PIGMENT. [1963].
Order from TTIS $15.00 TTIS NS-106

Trans. of Lakokrasochnye Materialy [i Ikh Primenenie] (USSR) 1962, no. 6, p. 54-56.

DESCRIPTORS: *Colorimetric analysis, *Aluminum, *Titanium compounds, *Dioxides, Pigments, Paints.

Mella, F.
VISCOSITY AND ITS MEASUREMENT. [1963] 5000 words,
Order from TTIS $50.00 TTIS NS-101

Trans. of Pitture e Vernici (Italy) 1962, v. 38, June, p. 203-212.

DESCRIPTORS: *Viscosity, Measurement.

Spondr, Victor.
THE RESULTS OF CHEMICAL ANALYSES OF TOBACCO BRANDS, HARVESTED AT VARIOUS STAGES OF RIPENESS. [1962] 9p.
Order from K-H $11.25 K-H 6311b

Trans. of mono. Sbornik Prac o Tabaku [Bratislava] 1955, p. 277-282.

DESCRIPTORS: Chemical analysis, *Tobacco, Plants (Botany), Growth.

Photographic Materials

DYE-TRANSFER DEVELOPMENT ELECTRO-PHOTOGRAPHIC MATERIAL. [1962] 5p. (fig. omitted)
Order from OTS or SLA $1.10 62-20411

Trans. of published Japanese patent 3194/62.

DESCRIPTORS: *Electrophotography, *Materials, Photographic images, Preparation, Photographic chemicals, *Dyes, Color photography.

This invention relates to a photographic material for developing the image of an object by exposure and electrification and particularly to a dye-transfer development electro-photographic material which permits a positive image to be obtained. (Author)

ELECTROPHOTOGRAPHIC MATERIAL. [1962] 8p. 10 refs.
Order from OTS or SLA $1.10 62-20417

Trans. of Belgian patent 608,146, filed 13 Sep 61 (appl. in West Germany 17 Sep 60) by Kalle A. G.

DESCRIPTORS: *Electrophotography, *Materials, Photoconductivity, Photographic emulsions, Condensation reactions.

The invention concerns an electrophotographic material consisting of a base support and of a photoconducting layer that is applied onto the latter, whose material is characterized in that the photoconducting layer consists at least in part of a condensation product of an aldehyde and of an aromatic amine that is possibly substituted. (Author)

Haydn, Hildegard and Weyde, Edith.
PROCEDURE FOR THE REPRODUCTION BY MEANS OF HEAT. [1963] 9p. refs.
Order from OTS or SLA $1.10 63-16450

Trans. of Belgium patent 613,471, filed 5 Feb 62, by AGFA Aktiengesellschaft, Germany (German patent application A 36,672 and A 37,157, filed 7 Feb 61).

DESCRIPTORS: Facsimile recording systems, Heat, *Plastic films, Thermoplastics, *Dyes, Photographic images.

A procedure for the preparation of reproductions is described. An original to be produced is exposed to the heat rays while it is in contact with a receptive sheet consisting of a thermoplastic polymer selected in the class consisting of polyethylene, polyvinylidene chloride, polystyrene, polyamides prepared from aliphatic dicarboxylic acids and aliphatic diamines, polycaprolactame, polyvinyl chloride, polyvinyl acetate, cellulose esters, cellulose ethers, rubber chlorohydrate and copolymers containing at least one constituent selected in the class consisting of vinylidene chloride, vinyl chloride, vinyl acetate, styrene, acrylonitrile, isobutylene, in the presence of a meltable or a sublimizable organic product selected in the class consisting of organic colorants, organic compounds containing a hydrophilic group and a hydrophobic group, natural and synthetic wax substances. The places of the receptive sheets correspond to the designs of the original become softened. The softened places of the sheet absorb the meltable organic product by forming in the thermoplastic sheet a reproduction of the original. (Author)

Khotoyanovich, S. I. and Giken, A. Yu.
PREPARATION OF ELECTROPHOTOGRAPHIC IMAGES IN LIQUID DEVELOPERS. [1962] 6p. 4 refs.
Order from OTS or SLA $1.10 62-20374

Trans. of Zhurnal Nauchn[o] i Prikl[adnoi] Fotogr[afii] i Kinematogr[afii] (USSR) 1962, v. 7, no. 1, p. 30-35. Another trans. is available from OTS or SLA $1.10 as 62-18592 [1962] 8p.

DESCRIPTORS: *Electrophotography, *Photographic images, Processing, Liquids, *Photographic chemicals.

Kitazawa, T., Tadokoro, H. and others.
THE RELATIONSHIP BETWEEN INFRARED ABSORPTION SPECTRA AND THE DEGREE OF POLYMERIZATION OF POLYOXYMETHYLENE, AND THE ORIENTATION OF MOLECULAR CHAINS IN FILM SAMPLES. [1963] 8p.
Order from ATS $10.00 ATS-29Q69J

Trans. of Kobunshi Kagaku (Japan) 1962, v. 19, no. 203, p. 148-153.

DESCRIPTORS: *Infrared films, *Infrared photography, Absorption, *Absorption spectrum, Polymerization, Polymers, Spectra (Infrared).

Lässig, W., Ulrich, H., and Steinert, H.
METHOD FOR THE PREPARATION OF PHOTOGRAPHIC IMAGES. [1962] 13p.
Order from OTS or SLA $1.60 62-20402

Trans. of Belgian patent 596,094, filed 17 Oct 60 (German priority A33,056 IVa/57b, 15 Oct 59 and A 35,476 IVa/57b, 2 Sep 60) by Agfa A. G.

DESCRIPTORS: *Photographic images, Preparation, Photochemistry, Organic compounds, Photographic chemicals, Color photography, Photographic recording media.

The invention involves a method for the preparation of photographic images by photolysis, characterized in that trihalomethylated compounds are subjected to photolysis, meaning by halogens chlorine, bromine and iodine, in the presence of aromatic or heterocyclic compounds which either contain nuclear CH members that are activated by suitable substituents such as amine groups or free or substituted hydroxy groups, or which contain nuclear CH members that are themselves reactive because of their constitution, for condensations or diazo-coupling. (Author)

Levinos, Steven.
PHOTOPOLYMERIZATION METHOD AND COMPOSITION. [1962] 11p.
Order from OTS or SLA $1.60 62-20404

Trans. of Belgian patent 610,268, filed 14 Nov 61 (U. S. priority no. 68,648, filed 14 Nov 60) by General Aniline & Film Corp.

DESCRIPTORS: *Photographic images, Preparation, *Photochemistry, *Polymerization, Organic compounds, Photographic chemicals, Photosensitivity, Electromagnetic waves, Radiation effects..

The invention regards a method for the production of a polymeric photographic image by photopolymerization, characterized in that one exposes to electro-magnetic radiations having a wavelength between the ultraviolet and the infrared, a layer that is sensitive to radiations, comprizing a polymerizable compound, containing the group CH= C<, an aromatic diazoic compound that is sensitive to radiation, of the series of p-phenylene diamines, and a photographic colloidal support, so that the diazoic compound is photo-decomposed in the exposed areas, one places the exposed layer in contact with an alkaline product that can form the diazotate of the diazoic compound, to obtain polymerization of the polymerizable compound, in the non-exposed areas, containing the residual diazoic compound, and one eliminates the non-polymerized residual compound of the exposed areas to obtain a polymeric photographic image that corresponds to the exposed areas of the layer. (Author)

Novikova, N. R. and Zakharov, V. I.
ELECTRON-MICROSCOPIC INVESTIGATION OF EMULSIFICATION AND RIPENING PROCESSES OF VERY FINE-GRAIN EMULSIONS. [1963] 8p. 7 refs.
Order from OTS or SLA $1.10 63-14477

Trans. of Zhurnal Nauchnoi i Prikladnoi Fotografii i Kinematografii (USSR) 1961, v. 6, no. 4, p. 247-250.

DESCRIPTORS: *Photographic emulsion, Aging, Silver compounds, Nitrates, *Potassium compounds, Bromides, Microstructure, Electron microscopy.

When $AgNO_3$ is in excess, the grains grow as a result of their recrystallization through a solution as they do where KBr is in excess. Where $AgNO_3$ has a large excess, the dispersion state of silver iodobromide grains is smaller, as compared with conditions where potassium bromide is in a similar excess. (Author)

Ooue, S. and Ueda, H.
LETTER CAPACITY OF PHOTOGRAPHIC MATERIALS. [1963] 8p.
Order from ATS $8.50 ATS-90Q69J

Trans. of Nihon Shashin Gakkai Kaishi (Japan) 1961, v. 24, no. 1, p. 36-40.

DESCRIPTORS: *Photographic equipment, Photography.

Sato, F., Maki, H., and Nakamura, K.
INVESTIGATIONS OF ELECTROPHOTOGRAPHIC TRANSFER. [1963] 7p.
Order from ATS $8.00 ATS-94Q69J

Trans. of Denshi Shashin (Japan) 1962, v. 4, no. 2, p. 32-36.

DESCRIPTORS: *Electrophotography.

Przepiorkiewicz, I.
A PHOTOGRAPHIC METHOD FOR THE PREPARATION OF FINE-MESH SCREENS. [1963] 2p.
Order from ATS $3.00 ATS-34Q70P

Trans. of Przeglad Elektroniki (Poland) 1962, v. 3, no. 3, p. 145.

DESCRIPTORS: *Photography.

Schalk, E.
A NEW WAY OF CHARACTERIZING THE SHARPNESS OF FILMS [1963] 3p.
Order from ATS $4.50 ATS-27Q70H

Trans. of Kep es Hangtechnika (Hungary) 1962, v. 8, no. 1, p. 17-18.

DESCRIPTORS: *Photographic films, Resolution.

Vasil'ev, V. V. and Lyalikov, K. S.
ROLE OF THE CONCENTRATION OF GELATIN IN FINE-GRAIN EMULSIONS DURING EMULSIFICATION. [1963] 3p. 4 refs.
Order from OTS or SLA $1.10 63-18072

Trans. of Zhurnal Nauchnoi i Prikladnoi Fotografii i Kinematografii (USSR) 1962, v. 7, no. 2, p. 146-148.

DESCRIPTORS: *Photographic emulsions, Colloids, Preparation, Resolution, *Gelatin, Silver compounds, Halides, Dyes, Distribution.

It was shown that by using minimum concentrations of gelatin (0.025, 0.050 percent) in the emulsification process in combination with an intense agitation, it is possible to prepare fine-grain emulsions ($\bar{x} = 0.07\mu^2$) which are sufficiently fast and have a high resolving power. (Author)

Plastics

IMPERMEABILIZING TREATMENT AGAINST GAS OR ODORS ON POLYETHYLENE PRODUCTS IN THE FORM OF SHEETS AND GENERAL CONTAINERS. [1963] 3p.
Order from OTS or SLA $1.10 63-14791

Trans. of Italian patent 537,229, by Pirelli Society, entered 13 July 55, date of concession 19 Dec 55.

DESCRIPTORS: *Polyethylene plastics, *Containers, *Plastic films, *Packing materials, Permeability, Gases, Odors, Vinyl plastics.

The invention involves an impermeabilizing treatment against gas and odors on products of polyethylene in the shape of sheets, tubes, phials, bottles and general containers, consisting in subjecting the product itself to immersion or spraying in/or with a solution of a vinyl resin, having a remarkably low permeability against gas and odors, minor however to the one of polyethylene, in such a manner that in these polyethylene products a very fine film of such synthetic resin deposits itself, having a low permeability to gas and odors. (Author)

IMPROVEMENTS IN THE MANUFACTURE OF PLASTIC SHEET. [1963] 6p.
Order from ATS $9.00 ATS-82Q69F

Trans. of French patent 1,251,365, by Société des Établissements Andouart, filed 8 Dec 59, granted 12 Dec 60.

DESCRIPTORS: *Sheets, *Plastics, Manufacturing methods.

Dowolf, James Francis and Foster, Samuel Phillip.
POLYPROPYLENE COMPOSITE. July 63, 8p. 4 refs.
Order from SA $16.00 SA Code-P-160

Trans. of published Japanese patent 7880/1962, cl. 25-H-311 (25-H-05) (25-A-13) appl. no. 29115/1959, filed 15 Sep 59, announced 11 July 62, by E. I. du Pont de Nemours & Co., U. S. A. (priority claimed: 18 Sep 58, U. S. A.).

DESCRIPTORS: *Polyethylene plastics, *Propenes, Stabilization, Additives, Thio radicals, *Propionic acids, Esters, Laurates, Sterates, Phenols, Sulfides, Citric acid, Glycols, Acetates.

Furukawa, Junji, Tsuruta, Teiji, and Nakayama, Yukio.
NEW METHOD OF POLYMERIZING METHYL METHACRYLATE BY A MIXED CATALYST CONSISTING OF A HYDRIDE OF AN ALKALI METAL AND AN ORGANOMETALLIC COMPOUND. July 63, 5p.
Order from SA $16.00 SA Code-P-121

Trans. of published Japanese patent 14641/1962, cl. 26-B-151 (13-F-1) appl. no. 21589/1960 filed 21 Apr 60, pub. 20 Sep 62, by Nippon Chemical Fiber Research Institute, Inc.

DESCRIPTORS: *Acrylic resins, Production, Acrylates, Methyl radicals, Polymerization, Catalysts, Metalorganic compounds, *Ziegler catalysts, Alkali metal compounds, *Sodium compounds, *Lithium compounds, Hydrides, Group II elements, Group III elements, *Zinc compounds, *Aluminum compounds, *Cadmium compounds, Alkyl radicals, Ethyl radicals.

Furukawa, Junji, Tsuruta, Teiji and others.
METHOD OF POLYMERIZING VINYL COMPOUNDS BY A MIXED CATALYST OF DIALKYL CADMIUM AND A TRANSITION METAL COMPOUND. July 63, 5p.
Order from SA $16.00 SA Code-P-120

Trans. of published Japanese patent 14634/1962, cl. 26-B-1 (26-B-131) (26-B-151) appl. no. 1186/1960, filed 19 Jan 60, pub. 20 Sep 62, by Nippon Chemical Fiber Research Institute, Inc.

DESCRIPTORS: *Vinyl plastics, Production, Vinyl radicals, Alkoxy radicals, Nitriles, Esters, *Acrylic resins, *Acrylonitriles, Polymerization, Catalysts, Metalorganic compounds, *Ziegler catalysts, *Cadmium compounds, Alkyl radicals, Transition elements, Halides.

Garbar, Mikhail.
DEVELOPMENT OF THE PLASTICS INDUSTRY IN THE USSR. 18 June 63, 12p. JPRS: 19719.
Order from OTS $0.50 63-31061

Trans. of Polimery [Tworzywa Wielkoczasteczkowe] (Poland) 1963, v. 8, no. 1, p. 1-3.

DESCRIPTORS: *Plastics industry, *Industrial production, Plastics, Polymers, Fibers (Synthetic), Synthetic rubber, Plastic paints, Varnishes, Glass textiles.

Glukhov, E. E. and Klaz, S. I.
RHEOLOGY PROBLEMS IN THE MANUFACTURE OF ARTICLES FROM PLASTICS. [1963] 7p. 20 refs.
Order from OTS or SLA $1.10 63-16977

Trans. of Plasticheskie Massy (USSR) 1960, no. 5, p. 22-25.

DESCRIPTORS: *Plastics, Manufacturing methods, Fluid flow, Elasticity, Viscosity, Plasticity.

Establishing the behavior patterns of flow should make it possible to resolve the fundamental technical problem: determining the optimum operational regimes, as well as the design of extrusion and die-casting equipment. The nature of the flow of plastics when they are utilized in the manufacture of articles from them is governed largely by the relationship between the forces of internal and external friction, together with the relaxational properties. The principal properties that determine the nature of flow can be explored with the aid of rotational instruments. In solving technological problems, with the exception of flow behavior, we have to make allowance for compressibility, homogenization, and chemical changes within the material. Articles possessing the required properties can be produced only when rheological studies are combined with investigations of the structural-mechanical properties of the articles produced. (Author)

Hoshi, Yuji and Kaneko, Akira.
A PROCESS FOR THE MANUFACTURE OF VINYL-CHLORIDE COPOLYMERS. July 63, 10p.
Order from SA $19.00 SA Code-P-115

Trans. of published Japanese patent 15042/1962, cl. 26-B-141 (26-B-151) (26-B-14) (26-B-022) appl. no. 48702/1960 filed 15 Dec 60, pub. 25 Sep 62, by Kureha Kasei Co., Ltd.

DESCRIPTORS: *Polyvinyl chloride, *Acrylic resins, Manufacturing methods, Vinyl radicals, Chlorides, Butyl radicals, Ethyl radicals, Hexyl radicals, Acrylates, Copolymerization.

Isojima, Toshizo, Yamamoto, Ren and others.
NOVEL COMPOSITION. July 63, 9p.
Order from SA $16.00 SA Code-P-117

Trans. of published Japanese patent 11523/1962, cl. 25-H-31 (25-H-05) (25-A-13) appl. no. 36935/1960 filed 31 Aug 60, pub. 20 Aug 62, by Mitsubishi Rayon Co. Ltd.

DESCRIPTORS: *Polyethylene plastics, Stabilization, Additives, *Amines, Benzyl radicals, *Phenones, Laurates, Salicyclic acids, Amides.

Kakiuchi, H. and Naokawa, J.
PROCESSES FOR THE FABRICATION OF HARDENING PRODUCTS FROM LOWER AROMATIC HYDROCARBON-FORMALDEHYDE RESINS. [1963] 5p.
Order from ATS $8.00 ATS-22Q70J

Trans. of Japanese patent 13,795 (1962) appl. filed 9 Aug 60, appl. no. 34,109 (1960) by Sumitomo Bakelite Co., Ltd., pub. 12 Sep 62.

DESCRIPTORS: *Plastics, Hydrocarbons, Formaldehyde, Hardening, Processing.

Kennedy, Robert Mickel.
PROCESS OF PREPARING SOLID POLYMERS. July 63, 11p.
Order from SA $19.00 SA Code-P-154

Trans. of published Japanese patent 12793/1960, cl. 26-B-11 (13-C-21) appl. no. 22706/1957 [filed] 12 Sep 57, pub. 6 Sep 60, by Sun Oil Co., U. S. A. (priority claimed: 27 Nov 56, U. S. A.).

DESCRIPTORS: *Polyethylene plastics, *Propenes, Polymers, Solids, Preparation, *Ziegler catalysts, *Titanium compounds, Chlorides, Aluminum compounds, Alkyl radicals.

Kennedy, Robert Mickel.
PROCESS OF PREPARING SOLID POLYMERS OF NORMALLY GASEOUS OLEFINS. July 63, 13p.
Order from SA $19.00 SA Code-P-158

Trans. of published Japanese patent 15247/1960, cl. 26-B-11 (26-B-1) appl. 27 Nov 57, as 29225/1957, pub. 13 Oct 60, by Sun Oil Co., U. S. A. (priority claimed: 27 Nov 56, U. S. A.).

DESCRIPTORS: *Polyethylene plastics, Solids, Preparation, *Ethylenes, *Propenes, Gases, Polymerization, *Catalysts, Separation, Centrifuge separation, Cutting tools, Ultrasonic radiation.

Kobayashi, Yuji, Fukuma, Noboru, and Yamada, Saburoe.
METHOD OF MAKING TUBULAR FILM OF POLY-PROPYLENE RESIN. July 63, 9p.
Order from SA $16.00 SA Code-P-169

Trans. of published Japanese patent 3471/62, cl. 25 N 121, appl. no. 40697/1960 filed 8 Oct 60, pub. 4 June 62, by Asahi Chemical Industry Co., Ltd.

DESCRIPTORS: *Plastic tubing, Manufacturing methods, *Plastic films, *Polyethylene plastics, *Propenes.

Mikhailov, N. V., Tokareva, L. G. and others.
THE PROBLEM OF STABILIZING POLY(ETHYLENE TEREPHTHALATE) MELTS. [1963] 9p.
Order from ATS $13.25 ATS-84Q68R

Trans. of Vysokomolekul[yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 8, p. 1186-1192.

DESCRIPTORS: *Polyethylene plastics, Stability, Phthalates.

Miyake, Taiji.
METHOD OF MAKING POLYESTERS. July 63, 8p.
Order from SA $16.00 SA Code-P-168

Trans. of published Japanese patent 5749/1962, cl. 26-D-6, appl. no. 31908/1959 filed 12 Oct 59, pub. 23 June 62, by Kurashiki Rayon Co., Ltd.

DESCRIPTORS: *Polyester plastics, Manufacturing methods, Dibasic acids, Esterification, *Phthalates, Methyl radicals, Ethylenes, Glycols, *Catalysts, Metalorganic compounds, *Mercury compounds, *Zinc compounds, *Cadmium compounds, Alkyl radicals, Ethyl radicals, Oxides.

Mund, W., Meerssche, M. van, and Momigny, J.
RADIOCHEMICAL POLYMERIZATION OF VINYL CHLORIDE UNDER CONSTANT PRESSURE.
[1963] 6p. (figs. omitted) 5 refs.
Order from SLA $1.10 63-14229

Trans. of Soc[iété] Chim[ique de] Belg[ique]. Bull[etin] 1953, v. 62, p. 109-118.

DESCRIPTORS: *Polyvinyl chloride, Production, *Vinyl chloride, Polymerization *Radiation chemistry, *Radon, Pressure, Reaction kinetics.

The polymerization which vinyl chloride undergoes when it is mixed with a small quantity of radon in a spherical space was studied by a new technique characterized by the maintenance of a constant pressure. These experiments showed that at 26°C the ionic yield, measured by pressure applied in a given radius of reaction chamber, does not undergo any measurable change, due to the decrease in the quantity of radon to the half of its initial value. (Author)

Natta, G. [Asta, G. dall' and others].
STEREOSPECIFIC POLYMERIZATION OF VINYL ETHERS. [1963] 16p. (figs. tables omitted) 18 refs.
Order from SLA $1.60 63-14208

Trans. of Angewandte Chemie (West Germany) 1959 [v. 71, no. 6]. p. 205-210.
Other translations are available from SLA mi$2.40, ph$3.30 as 59-15761 [1959] 14p.; mi$2.70, ph$4.80 as 59-17204 [1959] 27p. and $1.60 as 62-14035 [1961] [19]p.

DESCRIPTORS: *Vinyl plastics, Vinyl radicals, Butyl radicals, Propyl radicals, *Ethers, Polymerization, Stereochemistry, Molecular structure, Catalysis, Metalorganic compounds, *Ziegler catalysts, *Aluminum compounds, *Titanium compounds, Ethyl radicals, Pentyl radicals, Chlorides.

For abstract see Technical Translations 8: 142, 1962.

Natta, G., Pasquon, I., and Giachetti, E.
KINETICS OF STEREOSPECIFIC POLYMERIZATION OF PROPYLENE TO ISOTACTIC POLYMER. [1963] 8p. (figs. tables omitted) 35 refs.
Order from SLA $1.10 63-14203

Trans. of Angewandte Chemie (West Germany) 1957, v. 69, no. 7, p. 213-219.
Other translations are available from SLA mi$2.40, ph$3.30 as 59-15929 [1959] 15p.; $1.60 as 61-20651 [1961] [16]p. and $1.10 as 62-14036 [1961] 10p.

DESCRIPTORS: *Polyethylene plastics, Production, *Propenes, Polymerization, Reaction kinetics, Stereochemistry, Catalysis, Metalorganic compounds, *Ziegler catalysts, *Aluminum compounds, Ethyl radicals, *Titanium compounds, Chlorides.

For abstract see Technical Translations 2: 482, 1959.

Natta, Giulio, Pino, Piero, and Poli, Lido.
A PROCESS OF MANUFACTURING HIGHER MOLECULAR WEIGHT COPOLYMERS OF α-OLEFINS AND DIOLEFINS. July 63, 14p.
Order from SA $22.00 SA Code-P-153

Trans. of Japanese patent 255,539, cl. 26-B-2 (26-B-11) appl. no. 6804/1956 filed 17 Mar 56, pub. 25 May 59 as 3991/1959, by Montecatini Societa, Italy (priority claimed: 18 Mar 55, Italy).

DESCRIPTORS: *Polyethylene plastics, *Butenes, *Pentenes, *Dienes, *Butadienes, *Pentadienes, *Hexadienes, *Isoprene, *Copolymerization, Metalorganic compounds, *Ziegler catalysts, Titanium compounds, Chlorides, Aluminum compounds, Alkyl radicals, *Elastomers.

Okamura, Seizo, Hayashi, Koichiro, and Natori, Tadao.
A POLYMERIZATION PROCESS OF ACETALDEHYDE AND PROPIONALDEHYDE BY IONIZING RADIATION. July 63, 6p.
Order from SA $16.00 SA Code-P-116

Trans. of published Japanese patent 13893/1962, cl. 26-C-118 (136-G-21) (26-C-118.2) appl. no. 28796/1960 filed 25 June 60, pub. 13 Sep 62, by Japan Radiation Polymer Research Association, Inc.

DESCRIPTORS: *Acetyl plastics, Production, *Acetylaldehydes, Propyl radicals, Aldehydes, Polymerization, *Radiation chemistry, Catalysts, Aluminum compounds, Oxides.

Schnell, H.
POLYCARBONATES, A GROUP OF MODERN THERMO-PLASTIC SYNTHETICS: PREPARATION AND PROPERTIES OF CARBONIC ACID AROMATIC POLYESTERS. [1963] 15p. (figs. omitted) 52 refs.
Order from SLA $1.60 63-14202

Trans. of Angewandte Chemie (West Germany) 1956, v. 68, no. 20, p. 633-640.
Other translations are available from SLA $2.60 as 62-16455 [1962] 23p.; $4.60 as 61-16739 [1961] 43p.; $2.60 as 62-20083 [1962] [24]p.; from RIS $32.00 as RIS-61053, 26 June 59, 27p. and from ATS as ATS-42H13G, 17p.

DESCRIPTORS: *Thermosetting plastics, *Polyester plastics, Physical properties, Mechanical properties, Electrical properties, Production, Alkanes, Phenyl radicals, Dioxides, Phosgene, Estrification, *Carbonic acids, Esters.
For Abstract see Technical Translations 2: 813, 1959.

Tonami, Nobuo, Ozaki, Masami and others.
A BEAD POLYMERIZATION PROCESS. July 63, 9p.
Order from SA $16.00 SA Code-P-112

Trans. of published (Japanese) patent 9337/1962, cl. 26-B-011.3 (26-B-121) (26-B-151) appl. no. 21315/1960, filed 19 Apr 60, pub. 25 July 62, by Toyo Koatsu Industries, Inc.

DESCRIPTORS: *Styrene plastics, *Acrylic resins, *Polyvinyl alcohol, *Acrylonitriles, Polymerization, Particles, Production.

Weissenfels, Franz.
PHENOL RESIN FOAM MATERIALS. 5 May 62, 11p. (figs. tables [refs.] omitted).
Order from SLA $1.60 63-14040

Trans. of Kunststoffe (West Germany) 1961, v. 51, no. 11, p. 698-702, 708.

DESCRIPTORS: *Expanded plastics, Foams, *Phenolic plastics, Production, Physical properties, Processing, *Heat resistant plastics, Thermal insulation.

The article deals with the production of phenol resin foams, their qualities which are important to use, and fields of application found for them up to the present time. (Author)

Rubber and Elastomers

THIOGLYCOLIC ACID ETHYL ESTERS.
30 Jan 50 [3]p.
Order from OTS or SLA $1.10 63-14810

Trans. from mono. (report) of I. G. Farbenindustrie, A.G., n.p., n.d. (PB-17648).

DESCRIPTORS: *Rubber, Additives, *Glycolic acids, Thio radicals, Esters, Ethyl radicals, Tests.

Borisov, S. N.
FLUORINE-CONTAINING ELASTOMERS (Ftorsoderzhashchie Elastomery) tr. by G. Skinner. Aug 62 [12]p. 33 refs. RAE Library Trans. 1010; N62-17002; AD-284 527.
Order from OTS or SLA $1.60 63-23376

Trans. of #Kauchuk i Rezina (USSR) 1961, v. 20, no. 8, p. 16-20.

DESCRIPTORS: *Elastomers, *Heat-resistant plastics, *Halocarbon plastics, *Fluorocarbons, *Acrylic resins, *Polyester plastics, Polyamide plastics, Synthesis (Chemistry), Vulcanization, Physical properties, Bibliographies.

A review is given of data from non-soviet sources on three types of elastomer, viz. poly(perfluoroalkyl) acrylates, fluorinated polyesters and fluorine polymers not containing hydrogen. It is thought that some of the current research work may lead to the synthesis of materials which will retain their elastic properties at temperatures up to 500° (RAE abstract)

Uzina, R. V. and Basin, V. E.
GAS-PERMEABILITY OF RUBBER-CORD SYSTEMS. [1963] 13p. 13 refs.
Order from OTS or SLA $1.60 63-14418

Trans. of Kauchuk i Rezina (USSR) 1958, v. 17, no. 11, p. 18-21.

DESCRIPTORS: *Gases, Diffusion, *Tires, *Fibers, *Rubber, Impregnation, Additives, Polarization.

Impregnating the cord considerably reduces the gas permeability of the rubber cord system of tubeless tires. The gas permeability of the rubber cord system is reduced by impregnating the cord, largely because of the polar additives (casein, resorcin-formaldehyde tar etc.) contained in the impregnant. The experimental data leads to the conclusion that the main gas flow in a rubber cord system occurs in a direction perpendicular to that of the cord threads. If the ends of the cords are not insulated, the gas flows along the threads, and then the type of cord and the way in which the impregnant penetrates the cord threads becomes very important. (Author)

Wood and Paper

Kovanen, M.
THE ROTARY CUTTING OF VENEER. [1963] 23p.
Order from ATS $29.75 ATS-44Q69FN

Trans. of Paperi [ja] Puu (Finland) 1962, v. 44, no. 9, p. 439-446, 450-457.

DESCRIPTORS: *Plywood, *Cutting tools, *Rotation, Fiberboard, Sandwich construction.

Noack, Detlef.
SORPTION OF WOOD AT ELEVATED TEMPERATURES AND WATER VAPOR PRESSURES (Beitrag zur Sorption des Holzes in Bereich Höherer Temperaturen und Wasserdampfdrücke). [1963] 19p. (figs. omitted) 17 refs.
Order from SLA $1.60 63-14397

Trans. of Holz als Roh- und Werkstoff (West Germany) 1959, v. 17, no. 5, p. 205-212.
Another trans. is available from SLA mi $2.70, ph$4.80 as 60-16641 [1960] [29]p.

DESCRIPTORS: *Wood, Heat treatment, Moisture, *Sorption, *Laboratory equipment, Design, Temperature, *Water vapor, Vapor pressure, Pyrolysis, Density, Equations of state.

For abstract see Technical Translations 4:286, 1960.

Noack, Detlef and Kleuters, Wilhelm.
ON THE DETERMINATION OF THE MOISTURE CONTENT OF WOOD BY MEANS OF RADIOACTIVE ISOTOPES (BETA RAYS) (Über die Bestimmung des Holzfeuchtigkeitsgehaltes mit Hilfe Radioaktiver Isotope (B-Strahlen). June 61, 8p. (figs. refs. omitted). FPRB Trans. No. 147.
Order from NRCC NRCC C-4456

Trans. of Holz als Roh- und Werkstoff (West Germany) 1960 [v. 18] no. 8, p. 304-308.

DESCRIPTORS: *Wood, *Moisture, *Radioactive isotopes, *Beta particles, Measurement, Absorption, Nuclear industrial applications.

Shultz, Hermann
OBTAINING OF CHEMICAL RAW MATERIALS FROM WOOD TAR. [1963] 7p. 7 refs.
Order from SLA $1.10 63-14247

Trans. of Chem[iker] Zeit[ung] (Germany) 1935, v. 59, p. 113-114.

DESCRIPTORS: *Wood, *Tar, Degradation, *Phenols, Production.

MATHEMATICS

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 76 (MATHEMATICS SERIES). 28 June 63, 3p. JPRS: 19947.
Order from OTS $0.50 63-31165

Trans. of selected abstracts from Referativnyi Zhurnal. Matematika (USSR) 1962, no. 12.

DESCRIPTORS: *Abstracts, *Mathematics, Geometry, Projective geometry, Probability, Statistical processes.

Ferrero, C. and Ferrero, A.
INSTRUCTIONS ON THE "FER" SLIDE RULE, MODEL R-8 FOR THE CALCULATION OF RECTANGULAR SECTIONS WITH SIMPLE FLEXURE, FLEXURE UNDER LATERAL STRESS, AND TENSO-FLEXURE: RULES FOR THE CALCULATION OF REINFORCED CONCRETE, [1963] 25p. (tables omitted).
Order from SLA $2.60 63-14556

Trans. of unidentified mono., n. p., n. d.

DESCRIPTORS: *Instruction manuals, *Numerical analysis, *Stresses, Deformation, Tensile properties, Reinforced concrete.

Karhunen, K.
ON THE STRUCTURE OF STATIONARY RANDOM FUNCTIONS. [1962] 37p. 13 refs.
Order from SLA $3.60 63-10779

Trans. of Arkiv for Matematik (Sweden) 1949, v. 1, no. 13, p. 141-160.

DESCRIPTORS: *Statistical functions, Correlation techniques.

The development of a uniform linear theory of random functions and its applications to stationary random functions is attempted.

Rutishauser, H.
APPLICATIONS OF THE QUOTIENT-DIFFERENCE-ALGORITHM. [1962] 20p. (refs. omitted).
Order from SLA $1.60 63-10154

Trans. of Zeitschr[ift] f[ür] Angew[andte] Math[ematik] u[nd] Phys[ik] (Switzerland) 1954, v. 5, p. 496-508.

DESCRIPTORS: *Algorithms, Series, Continued fractions, Algebra, Equations, Polynomials, Functions, Difference equations, Taylor's series.

Rutishauser, H.
DETERMINATION OF THE EIGENVALUES AND EIGENVECTORS OF A MATRIX WITH THE AID OF THE QUOTIENT-DIFFERENCE-ALGORITHM. [1962] 25p. 6 refs.
Order from SLA $2.60 63-10153

Trans. of Zeitschr[ift] f[ür] Angew[andte] Math[ematik] u[nd] Phys[ik] (Switzerland) 1955, v. 6, p. 387-401.

DESCRIPTORS: *Algorithms, *Matrix algebra, Integral equations, Series, Functions, Continued fractions, Taylor's series, Difference equations.

Rutishauser H.
A WRONSKI FORMULA AND ITS SIGNIFICANCE FOR THE QUOTIENT-DIFFERENCE-ALGORITHM. [1962] 11p. 6 refs.
Order from SLA $1.60 63-10155

Trans. of Z[eitschrift] f[ür] Angew[andte] Math[ematik] u[nd] Phys[ik] (Switzerland) 1956, v. 7, p. 164-169.

DESCRIPTORS: *Algorithms, Series, Functions, Polynomials, Determinants, Algebra, Taylor's series, Difference equations.

Vladimirov, V. S.
ON THE APPLICATION OF THE PROPERTIES OF THE REGIONS OF HOLOMORPHY TO THE STUDY OF THE SOLUTIONS OF DIFFERENTIAL EQUATIONS (O Primenenii Svoistv Oblastei Golomorfnosti k Izuchenii Differentsialykh Uravnenii). [1962] [10]p. (foreign text included) 10 refs. [USASIA] Trans. Log. no. 1151 A.
Order from OTS or SLA $1.10 62-32626

Trans. of Akademiya Nauk SSSR. Doklady, 1960, v. 134, no. 3 [p. 511-513].

DESCRIPTORS: *Differential equations, Functions.

This paper indicates a new approach to the study of questions involving the correctness of formulation of problems for a single class of differential equations with constant coefficients and even for equations of a more general nature-convolution equations. The methods proposed have been conceived in recent years in connection with the substantiation of dispersion ratios. These methods are based on the properties of holomorphic envelopes for regions of special form, which arise during the analytical continuation of (generalized) functions, the properties of which reflect the fundamental requirements of the quantum field theory. (Author)

Computing Devices

Aleksidze, M. A.
MATHEMATICAL PROBLEMS IN CREATING A DIGITAL GRID ANALYZER. 27 Mar 63 [30]p. 16 refs. FTD-TT-62-1823. AD-401 593
Order from OTS or SLA $3.60 63-19159

Unedited rough draft trans. of Akademiya Nauk Gruzinskoi SSR [Tiflis]. Trudy Vychislitel'nogo Tsentra, 1960, v. 1, p. 263-282.

DESCRIPTORS: *Applied mathematics, *Digital computers, Computers, Design, *Computer storage devices, Difference equations, Operators (Mathematics), Numerical analysis, Errors.

Topics include: Asymptotic relationships between local and integral errors in solving boundary problems; iteration processes connected with a difference solution to a boundary problem; one grid approximation for the laplacian differential operator; and, electronic digital computer parameters that are optimum from the viewpoint of boundary-problem difference solutions.

Pukhov, G. E.
FUNDAMENTALS OF THE GENERAL THEORY OF QUASI-ANALOG SYSTEMS. 22 Jan 63 [35]p. 29 refs. FTD-TT-62-1557; AD-298 210.
Order from OTS or SLA $3.60 63-15907

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Elektromekhanika (USSR) 1961 [v. 4] no. 9, p. 3-21.

DESCRIPTORS: *Analog systems, Theory, Models (Simulations), Algebra, Differential equations, Analog computers, *Computers.

Consideration is given to certain questions of the theory of systems (here called quasi-analog systems), the special feature of which is the fact that for them the equations of the simulator and the equations of the simulated object are not similar to one another.

MECHANICS

Alumyae, N. A.
APPLICATION OF THE GENERALIZED VARIATIONAL PRINCIPLE OF CASTIGLIANO TO THE INVESTIGATION OF THE POST-CRITICAL STAGE OF THIN-WALLED ELASTIC SHELLS: MEMORANDUM. [1962] 11p. 12 refs.
Order from OTS or SLA $1.60 63-10252

Trans. of Prikladnaya Matematika i Mekhanika (USSR) 1950, v. 14, no. 1, p. 93-98.

DESCRIPTORS: *Elastic shells, *Deformation, *Stresses, Mechanical properties, Mathematical analysis, Calculus of variations.

Examples are given of the use of the generalized variational principle of Castigliano in solving the following problems: (1) determination of the critical load; (2) cylindrical buckling of a compressed flat plate, with a span 1, freely supported at $X^1 = X = \varphi \pm 1/2$; (3) cylindrical buckling of a compressed flat plate, rigidly supported at the boundaries $X = \varphi \pm 1/2$; (4) buckling of a uniformly compressed square surface rigidly supported along the boundaries $X^2 = y = \varphi \pm a/2$ and freely supported along the other sides, $X^1 = X = \varphi \pm x/2$; and (5) square plate compressed in both directions by uniform forces, with sides, "α", rigidly supported.

Horath, Werner.
IMPROVEMENTS TO INTEGRATING FLOATING CYROMETERS. [1962] 17p. (fig. omitted).
Order from OTS or SLA $1.60 62-18919

Trans. of French patent 1,224,158, 22 June 60, requested 28 Jan 59, granted 8 Feb 60, by company for the manufacture of precision measuring instruments (S. F. I. M.).

DESCRIPTORS: *Gyroscopes, Gyro stabilizers, Mobile, Precision equipment, Design, Integrators.

Kaiser, R[udolf].
THEORETICAL AND EXPERIMENTAL DETERMINATION OF DEFLECTIONS AND STRESSES IN SQUARE PLATES FREELY SUPPORTED AT THE EDGES WITH UNIFORM LOAD DISTRIBUTION AND LARGE DEFLECTIONS [Rechnerische und Experimentelle Ermittlung der Durchbiegungen und Spannungen von Quadratischen Platten bei Freier Auflagerung an den Rändern, Gleichmässig Verteilter Last und Grossen Ausbeigungen]. [May 63].
Order from BGIRA BGIRA-555

Trans. of Zeit[Schrift] f[ür] Angew[andte] Math[ematik] u[nd] Mech[anik] (Germany) [1936] v. 16, no. 2, p. 73-98.

DESCRIPTORS: Deflection, Stresses, *Sheets, Geometric forms, *Loading (Mechanics), Load distribution.

Vorovich, I. I.
ON THE BUBNOV-GALERKIN METHOD IN THE NONLINEAR THEORY. [1961] 7p. 7 refs. MDF V-122.
Order from OTS $0.50 62-11638

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1956, v. 110, no. 5, p. 723-726.

DESCRIPTORS: *Nonlinear systems, Theory, Equations, Functional analysis, Vector analysis.

Yutkin, L. A. and Gol'tsova, L. I.
METHOD OF OBTAINING IMPACT DEFORMING FORCES BY MEANS OF ELECTROHYDRAULIC SHOCKS. 28 Mar 63 [5]p. FTD-TT-63-25, AD-402 451
Order from OTS or SLA $1.10 63-19488

Unedited rough draft trans. of Russian patent 142,502, 1962, appl. no. 419,284/25, 24 May 62.

DESCRIPTORS: *Impact shock, *Deformation, Shock tubes, Hydraulic actuators, *Hydraulic research.

The invention concerns a method of obtaining impact deforming forces by means of electrohydraulic shocks produced in a fluid medium, which is distinguished by the fact that for the purpose of accomplishing forging, stamping, lamination beading, riveting, cleaning, forcing in, bending, breaking, cutting, and other kinds of processing of materials, electrohydraulic shocks are produced in a cylinder or chamber with a piston or membrane (or in a series of cylinders or chambers oriented in the necessary way), taking up the force of the shocks and transmitting them, directly or through a suitable instrument connected with them, to the object being processed, and the reverse shifting of the piston or membrane is accomplished by atmospheric pressure on slamming the cavitation void. (Author)

Mund, W., Meerssche, M. van, and Momigny, J.
RADIOCHEMICAL POLYMERIZATION OF VINYL CHLORIDE UNDER CONSTANT PRESSURE.
[1963] 6p. (figs. omitted) 5 refs.
Order from SLA $1.10 63-14229

Trans. of Soc[iété] Chim[ique de] Belg[ique]. Bull[etin] 1953, v. 62, p. 109-118.

DESCRIPTORS: *Polyvinyl chloride, Production, *Vinyl chloride, Polymerization *Radiation chemistry, *Radon, Pressure, Reaction kinetics.

The polymerization which vinyl chloride undergoes when it is mixed with a small quantity of radon in a spherical space was studied by a new technique characterized by the maintenance of a constant pressure. These experiments showed that at 26°C the ionic yield, measured by pressure applied in a given radius of reaction chamber, does not undergo any measurable change, due to the decrease in the quantity of radon to the half of its initial value. (Author)

Natta, G. [Asta, G. dall' and others].
STEREOSPECIFIC POLYMERIZATION OF VINYL ETHERS. [1963] 16p. (figs. tables omitted) 18 refs.
Order from SLA $1.60 63-14208

Trans. of Angewandte Chemie (West Germany) 1959 [v. 71, no. 6]. p. 205-210.
Other translations are available from SLA mi$2.40, ph$3.30 as 59-15761 [1959] 14p.; mi$2.70, ph$4.80 as 59-17204 [1959] 27p. and $1.60 as 62-14035 [1961] [19]p.

DESCRIPTORS: *Vinyl plastics, Vinyl radicals, Butyl radicals, Propyl radicals, *Ethers, Polymerization, Stereochemistry, Molecular structure, Catalysis, Metalorganic compounds, *Ziegler catalysts, *Aluminum compounds, *Titanium compounds, Ethyl radicals, Pentyl radicals, Chlorides.

For abstract see Technical Translations 8: 142, 1962.

Natta, G., Pasquon, I., and Giachetti, E.
KINETICS OF STEREOSPECIFIC POLYMERIZATION OF PROPYLENE TO ISOTACTIC POLYMER. [1963] 8p. (figs. tables omitted) 35 refs.
Order from SLA $1.10 63-14203

Trans. of Angewandte Chemie (West Germany) 1957, v. 69, no. 7, p. 213-219.
Other translations are available from SLA mi$2.40, ph$3.30 as 59-15929 [1959] 15p.; $1.60 as 61-20651 [1961] [16]p. and $1.10 as 62-14036 [1961] 10p.

DESCRIPTORS: *Polyethylene plastics, Production, *Propenes, Polymerization, Reaction kinetics, Stereochemistry, Catalysis, Metalorganic compounds, *Ziegler catalysts, *Aluminum compounds, Ethyl radicals, *Titanium compounds, Chlorides.

For abstract see Technical Translations 2: 482, 1959.

Natta, Giulio, Pino, Piero, and Poli, Lido.
A PROCESS OF MANUFACTURING HIGHER MOLECULAR WEIGHT COPOLYMERS OF α-OLEFINS AND DIOLEFINS. July 63, 14p.
Order from SA $22.00 SA Code-P-153

Trans. of Japanese patent 255,539, cl. 26-B-2 (26-B-11) appl. no. 6804/1956 filed 17 Mar 56, pub. 25 May 59 as 3991/1959, by Montecatini Societa, Italy (priority claimed: 18 Mar 55, Italy).

DESCRIPTORS: *Polyethylene plastics, *Butenes, *Pentenes, *Dienes, *Butadienes, *Pentadienes, *Hexadienes, *Isoprene, *Copolymerization, Metalorganic compounds, *Ziegler catalysts, Titanium compounds, Chlorides, Aluminum compounds, Alkyl radicals, *Elastomers.

Okamura, Seizo, Hayashi, Koichiro, and Natori, Tadao.
A POLYMERIZATION PROCESS OF ACETALDEHYDE AND PROPIONALDEHYDE BY IONIZING RADIATION. July 63, 6p.
Order from SA $16.00 SA Code-P-116

Trans. of published Japanese patent 13893/1962, cl. 26-C-118 (136-G-21) (26-C-118.2) appl. no. 28796/1960 filed 25 June 60, pub. 13 Sep 62, by Japan Radiation Polymer Research Association, Inc.

DESCRIPTORS: *Acetyl plastics, Production, *Acetylaldehydes, Propyl radicals, Aldehydes, Polymerization, *Radiation chemistry, Catalysts, Aluminum compounds, Oxides.

Schnell, H.
POLYCARBONATES, A GROUP OF MODERN THERMO-PLASTIC SYNTHETICS: PREPARATION AND PROPERTIES OF CARBONIC ACID AROMATIC POLYESTERS. [1963] 15p. (figs. omitted) 52 refs.
Order from SLA $1.60 63-14202

Trans. of Angewandte Chemie (West Germany) 1956, v. 68, no. 20, p. 633-640.
Other translations are available from SLA $2.60 as 62-16455 [1962] 23p.; $4.60 as 61-16739 [1961] 43p.; $2.60 as 62-20083 [1962] [24]p.; from RIS $32.00 as RIS-61053, 26 June 59, 27p. and from ATS as ATS-42H13G, 17p.

DESCRIPTORS: *Thermosetting plastics, *Polyester plastics, Physical properties, Mechanical properties, Electrical properties, Production, Alkanes, Phenyl radicals, Dioxides, Phosgene, Estrification, *Carbonic acids, Esters.
For Abstract see Technical Translations 2: 813, 1959.

Tonami, Nobuo, Ozaki, Masami and others.
A BEAD POLYMERIZATION PROCESS. July 63, 9p.
Order from SA $16.00 SA Code-P-112

Trans. of published (Japanese) patent 9337/1962, cl. 26-B-011.3 (26-B-121) (26-B-151) appl. no. 21315/1960, filed 19 Apr 60, pub. 25 July 62, by Toyo Koatsu Industries, Inc.

DESCRIPTORS: *Styrene plastics, *Acrylic resins, *Polyvinyl alcohol, *Acrylonitriles, Polymerization, Particles, Production.

Weissenfels, Franz.
PHENOL RESIN FOAM MATERIALS. 5 May 62, 11p. (figs. tables [refs.] omitted).
Order from SLA $1.60 63-14040

Trans. of Kunststoffe (West Germany) 1961, v. 51, no. 11, p. 698-702, 708.

DESCRIPTORS: *Expanded plastics, Foams, *Phenolic plastics, Production, Physical properties, Processing, *Heat resistant plastics, Thermal insulation.

The article deals with the production of phenol resin foams, their qualities which are important to use, and fields of application found for them up to the present time. (Author)

Rubber and Elastomers

THIOGLYCOLIC ACID ETHYL ESTERS.
30 Jan 50 [3]p.
Order from OTS or SLA $1.10 63-14810

Trans. from mono. (report) of I. G. Farbenindustrie, A.G., n.p., n.d. (PB-17648).

DESCRIPTORS: *Rubber, Additives, *Glycolic acids, Thio radicals, Esters, Ethyl radicals, Tests.

Borisov, S. N.
FLUORINE-CONTAINING ELASTOMERS (Ftorsoderzhashchie Elastomery) tr. by G. Skinner. Aug 62 [12]p. 33 refs. RAE Library Trans. 1010; N62-17002; AD-284 527.
Order from OTS or SLA $1.60 63-23376

Trans. of #Kauchuk i Rezina (USSR) 1961, v. 20, no. 8, p. 16-20.

DESCRIPTORS: *Elastomers, *Heat-resistant plastics, *Halocarbon plastics, *Fluorocarbons, *Acrylic resins, *Polyester plastics, Polyamide plastics, Synthesis (Chemistry), Vulcanization, Physical properties, Bibliographies.

A review is given of data from non-soviet sources on three types of elastomer, viz. poly(perfluoroalkyl) acrylates, fluorinated polyesters and fluorine polymers not containing hydrogen. It is thought that some of the current research work may lead to the synthesis of materials which will retain their elastic properties at temperatures up to 500° (RAE abstract)

Uzina, R. V. and Basin, V. E.
GAS-PERMEABILITY OF RUBBER-CORD SYSTEMS. [1963] 13p. 13 refs.
Order from OTS or SLA $1.60 63-14418

Trans. of Kauchuk i Rezina (USSR) 1958, v. 17, no. 11, p. 18-21.

DESCRIPTORS: *Gases, Diffusion, *Tires, *Fibers, *Rubber, Impregnation, Additives, Polarization.

Impregnating the cord considerably reduces the gas permeability of the rubber cord system of tubeless tires. The gas permeability of the rubber cord system is reduced by impregnating the cord, largely because of the polar additives (casein, resorcin-formaldehyde tar etc.) contained in the impregnant. The experimental data leads to the conclusion that the main gas flow in a rubber cord system occurs in a direction perpendicular to that of the cord threads. If the ends of the cords are not insulated, the gas flows along the threads, and then the type of cord and the way in which the impregnant penetrates the cord threads becomes very important. (Author)

Wood and Paper

Kovanen, M.
THE ROTARY CUTTING OF VENEER. [1963] 23p.
Order from ATS $29.75 ATS-44Q69FN

Trans. of Paperi [ja] Puu (Finland) 1962, v. 44, no. 9, p. 439-446, 450-457.

DESCRIPTORS: *Plywood, *Cutting tools, *Rotation, Fiberboard, Sandwich construction.

Noack, Detlef.
SORPTION OF WOOD AT ELEVATED TEMPERATURES AND WATER VAPOR PRESSURES (Beitrag zur Sorption des Holzes in Bereich Höherer Temperaturen und Wasserdampfdrücke). [1963] 19p. (figs. omitted) 17 refs.
Order from SLA $1.60 63-14397

Trans. of Holz als Roh- und Werkstoff (West Germany) 1959, v. 17, no. 5, p. 205-212.
Another trans. is available from SLA mi $2.70, ph$4.80 as 60-16641 [1960] [29]p.

DESCRIPTORS: *Wood, Heat treatment, Moisture, *Sorption, *Laboratory equipment, Design, Temperature, *Water vapor, Vapor pressure, Pyrolysis, Density, Equations of state.

For abstract see Technical Translations 4:286, 1960.

Noack, Detlef and Kleuters, Wilhelm.
ON THE DETERMINATION OF THE MOISTURE CONTENT OF WOOD BY MEANS OF RADIOACTIVE ISOTOPES (BETA RAYS) (Über die Bestimmung des Holzfeuchtigkeitsgehaltes mit Hilfe Radioaktiver Isotope (B=Strahlen). June 61, 8p. (figs. refs. omitted). FPRB Trans. No. 147.
Order from NRCC NRCC C-4456

Trans. of Holz als Roh- und Werkstoff (West Germany) 1960 [v. 18] no. 8, p. 304-308.

DESCRIPTORS: *Wood, *Moisture, *Radioactive isotopes, *Beta particles, Measurement, Absorption, Nuclear industrial applications.

Shultz, Hermann
OBTAINING OF CHEMICAL RAW MATERIALS FROM WOOD TAR. [1963] 7p. 7 refs.
Order from SLA $1.10 63-14247

Trans. of Chem[iker] Zeit[ung] (Germany) 1935, v. 59, p. 113-114.

DESCRIPTORS: *Wood, *Tar, Degradation, *Phenols, Production.

MATHEMATICS

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 76 (MATHEMATICS SERIES). 28 June 63, 3p. JPRS: 19947.
Order from OTS $0.50 63-31165

Trans. of selected abstracts from Referativnyi Zhurnal. Matematika (USSR) 1962, no. 12.

DESCRIPTORS: *Abstracts, *Mathematics, Geometry, Projective geometry, Probability, Statistical processes.

Ferrero, C. and Ferrero, A.
INSTRUCTIONS ON THE "FER" SLIDE RULE, MODEL R-8 FOR THE CALCULATION OF RECTANGULAR SECTIONS WITH SIMPLE FLEXURE, FLEXURE UNDER LATERAL STRESS, AND TENSO-FLEXURE: RULES FOR THE CALCULATION OF REINFORCED CONCRETE, [1963] 25p. (tables omitted).
Order from SLA $2.60 63-14556

Trans. of unidentified mono., n. p., n. d.

DESCRIPTORS: *Instruction manuals, *Numerical analysis, *Stresses, Deformation, Tensile properties, Reinforced concrete.

Karhunen, K.
ON THE STRUCTURE OF STATIONARY RANDOM FUNCTIONS. [1962] 37p. 13 refs.
Order from SLA $3.60 63-10779

Trans. of Arkiv for Matematik (Sweden) 1949, v. 1, no. 13, p. 141-160.

DESCRIPTORS: *Statistical functions, Correlation techniques.

The development of a uniform linear theory of random functions and its applications to stationary random functions is attempted.

Rutishauser, H.
APPLICATIONS OF THE QUOTIENT-DIFFERENCE-ALGORITHM. [1962] 20p. (refs. omitted).
Order from SLA $1.60 63-10154

Trans. of Zeitschr[ift] f[ür] Angew[andte] Math[ematik] u[nd] Phys[ik] (Switzerland) 1954, v. 5, p. 496-508.

DESCRIPTORS: *Algorithms, Series, Continued fractions, Algebra, Equations, Polynomials, Functions, Difference equations, Taylor's series.

Rutishauser, H.
DETERMINATION OF THE EIGENVALUES AND EIGENVECTORS OF A MATRIX WITH THE AID OF THE QUOTIENT-DIFFERENCE-ALGORITHM. [1962] 25p. 6 refs.
Order from SLA $2.60 63-10153

Trans. of Zeitschr[ift] f[ür] Angew[andte] Math[ematik] u[nd] Phys[ik] (Switzerland) 1955, v. 6, p. 387-401.

DESCRIPTORS: *Algorithms, *Matrix algebra, Integral equations, Series, Functions, Continued fractions, Taylor's series, Difference equations.

Rutishauser H.
A WRONSKI FORMULA AND ITS SIGNIFICANCE FOR THE QUOTIENT-DIFFERENCE-ALGORITHM. [1962] 11p. 6 refs.
Order from SLA $1.60 63-10155

Trans. of Z[eitschrift] f[ür] Angew[andte] Math[ematik] u[nd] Phys[ik] (Switzerland) 1956, v. 7, p. 164-169.

DESCRIPTORS: *Algorithms, Series, Functions, Polynomials, Determinants, Algebra, Taylor's series, Difference equations.

Vladimirov, V. S.
ON THE APPLICATION OF THE PROPERTIES OF THE REGIONS OF HOLOMORPHY TO THE STUDY OF THE SOLUTIONS OF DIFFERENTIAL EQUATIONS (O Primenenii Svoistv Oblastei Golomorfnosti k Izuchenii Differentsialykh Uravnenii). [1962] [10]p. (foreign text included) 10 refs. [USASIA] Trans. Log. no. 1151 A.
Order from OTS or SLA $1.10 62-32626

Trans. of Akademiya Nauk SSSR. Doklady, 1960, v. 134, no. 3 [p. 511-513].

DESCRIPTORS: *Differential equations, Functions.

This paper indicates a new approach to the study of questions involving the correctness of formulation of problems for a single class of differential equations with constant coefficients and even for equations of a more general nature-convolution equations. The methods proposed have been conceived in recent years in connection with the substantiation of dispersion ratios. These methods are based on the properties of holomorphic envelopes for regions of special form, which arise during the analytical continuation of (generalized) functions, the properties of which reflect the fundamental requirements of the quantum field theory. (Author)

Computing Devices

Aleksidze, M. A.
MATHEMATICAL PROBLEMS IN CREATING A DIGITAL GRID ANALYZER. 27 Mar 63 [30]p. 16 refs. FTD-TT-62-1823. AD-401 593
Order from OTS or SLA $3.60 63-19159

Unedited rough draft trans. of Akademiya Nauk Gruzinskoi SSR [Tiflis]. Trudy Vychislitel'nogo Tsentra, 1960, v. 1, p. 263-282.

DESCRIPTORS: *Applied mathematics, *Digital computers, Computers, Design, *Computer storage devices, Difference equations, Operators (Mathematics), Numerical analysis, Errors.

Topics include: Asymptotic relationships between local and integral errors in solving boundary problems; iteration processes connected with a difference solution to a boundary problem; one grid approximation for the laplacian differential operator; and, electronic digital computer parameters that are optimum from the viewpoint of boundary-problem difference solutions.

Pukhov, G. E.
FUNDAMENTALS OF THE GENERAL THEORY OF QUASI-ANALOG SYSTEMS. 22 Jan 63 [35]p. 29 refs. FTD-TT-62-1557; AD-298 210.
Order from OTS or SLA $3.60 63-15907

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Elektromekhanika (USSR) 1961 [v. 4] no. 9, p. 3-21.

DESCRIPTORS: *Analog systems, Theory, Models (Simulations), Algebra, Differential equations, Analog computers, *Computers.

Consideration is given to certain questions of the theory of systems (here called quasi-analog systems), the special feature of which is the fact that for them the equations of the simulator and the equations of the simulated object are not similar to one another.

MECHANICS

Alumyae, N. A.
APPLICATION OF THE GENERALIZED VARIATIONAL PRINCIPLE OF CASTIGLIANO TO THE INVESTIGATION OF THE POST-CRITICAL STAGE OF THIN-WALLED ELASTIC SHELLS: MEMORANDUM. [1962] 11p. 12 refs.
Order from OTS or SLA $1.60 63-10252

Trans. of Prikladnaya Matematika i Mekhanika (USSR) 1950, v. 14, no. 1, p. 93-98.

DESCRIPTORS: *Elastic shells, *Deformation, *Stresses, Mechanical properties, Mathematical analysis, Calculus of variations.

Examples are given of the use of the generalized variational principle of Castigliano in solving the following problems: (1) determination of the critical load; (2) cylindrical buckling of a compressed flat plate, with a span l, freely supported at $X^1 = X = \varphi \pm l/2$; (3) cylindrical buckling of a compressed flat plate, rigidly supported at the boundaries $X = \varphi \pm 1/2$; (4) buckling of a uniformly compressed square surface rigidly supported along the boundaries $X^2 = y = \varphi \pm a/2$ and freely supported along the other sides, $X^1 = X = \varphi \pm x/2$; and (5) square plate compressed in both directions by uniform forces, with sides, "α", rigidly supported.

Horath, Werner.
IMPROVEMENTS TO INTEGRATING FLOATING CYROMETERS. [1962] 17p. (fig. omitted).
Order from OTS or SLA $1.60 62-18919

Trans. of French patent 1,224,158, 22 June 60, requested 28 Jan 59, granted 8 Feb 60, by company for the manufacture of precision measuring instruments (S. F. I. M.).

DESCRIPTORS: *Gyroscopes, Gyro stabilizers, Mobile, Precision equipment, Design, Integrators.

Kaiser, R[udolf].
THEORETICAL AND EXPERIMENTAL DETERMINATION OF DEFLECTIONS AND STRESSES IN SQUARE PLATES FREELY SUPPORTED AT THE EDGES WITH UNIFORM LOAD DISTRIBUTION AND LARGE DEFLECTIONS [Rechnerische und Experimentelle Ermittlung der Durchbiegungen und Spannungen von Quadratischen Platten bei Freier Auflagerung an den Rändern, Gleichmässig Verteilter Last und Grossen Ausbeigungen]. [May 63].
Order from BGIRA BGIRA-555

Trans. of Zeit[Schrift] f[ür] Angew[andte] Math[ematik] u[nd] Mech[anik] (Germany) [1936] v. 16, no. 2, p. 73-98.

DESCRIPTORS: Deflection, Stresses, *Sheets, Geometric forms, *Loading (Mechanics), Load distribution.

Vorovich, I. I.
ON THE BUBNOV-GALERKIN METHOD IN THE NONLINEAR THEORY. [1961] 7p. 7 refs. MDF V-122.
Order from OTS $0.50 62-11638

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1956, v. 110, no. 5, p. 723-726.

DESCRIPTORS: *Nonlinear systems, Theory, Equations, Functional analysis, Vector analysis.

Yutkin, L. A. and Gol'tsova, L. I.
METHOD OF OBTAINING IMPACT DEFORMING FORCES BY MEANS OF ELECTROHYDRAULIC SHOCKS. 28 Mar 63 [5]p. FTD-TT-63-25. AD-402 451
Order from OTS or SLA $1.10 63-19488

Unedited rough draft trans. of Russian patent 142, 502, 1962, appl. no. 419, 284/25, 24 May 62.

DESCRIPTORS: *Impact shock, *Deformation, Shock tubes, Hydraulic actuators, *Hydraulic research.

The invention concerns a method of obtaining impact deforming forces by means of electrohydraulic shocks produced in a fluid medium, which is distinguished by the fact that for the purpose of accomplishing forging, stamping, lamination beading, riveting, cleaning, forcing in, bending, breaking, cutting, and other kinds of processing of materials, electrohydraulic shocks are produced in a cylinder or chamber with a piston or membrane (or in a series of cylinders or chambers oriented in the necessary way), taking up the force of the shocks and transmitting them, directly or through a suitable instrument connected with them, to the object being processed, and the reverse shifting of the piston or membrane is accomplished by atmospheric pressure on slamming the cavitation void. (Author)

Kosterin, S. I., Koshmarov, Yu. A., and Finat'ev, Yu. P.
EXPERIMENTAL RESEARCH OF THE HYDRODYNAMICS OF A TURBULENT FLOW OF AIR IN THE GAP BETWEEN ROTATING COAXIAL CYLINDERS. 4 Mar 63 [12]p. 6 refs. FTD-TT-63-18;
Order from OTS or SLA $1.60 63-19435

Unedited rough draft trans. of Inzhenerno-Fizicheskii Zhurnal, 1962, v. 5, no. 5, p. 15-20.
Another trans. is available from ICE in v. 2, no. 4, $15.00/year.

DESCRIPTORS: *Hydrodynamics, *Heat transfer, *Turbulent flow, Air, Fluid flow, Cylinders, Rotation, *Chemical engineering.

Results are presented of experimental researches in the flow of air in the ring channel between a rotating inner cylinder and a stationary outer one. There are established boundaries of the regions of flow for the various systems. The results are presented of the experimental measurements of the losses by friction. (Author)

Mel'nikov, D. A.
REFLECTION OF SUDDEN CHANGES IN DENSITY FROM THE AXIS OF SYMMETRY. 29 Mar 63 [8]p. 1 ref. FTD-TT-62-1785. AD-402 427
Order from OTS or SLA $1.60 63-19479

Unedited rough draft trans. of [Akademiya Nauk SSSR]. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Mekhanika i Mashinostroenie, 1962, no. 3, p. 24-30.

DESCRIPTORS: *Supersonic flow, *Axially symmetric flow, Pressure, Condensation, Reflection, Supersonic nozzles, *Subsonic flow, Density.

The flow of a supersonic axially symmetrical stream from a nozzle, with pressure in the stream greater or less than the pressure in the surrounding medium, is accompanied by the formation of jumps of condensation, which are reflected from the axis of symmetry. The existing methods enable one to compute the flow in such a stream, with the exception of the area of the reflection of the jumps in condensation from the axis. The problem is stated with its solution obtained for the flow of a gas in the region of the reflection of an incident jump in condensation from the axis of symmetry and the formation of a central jump in condensation converting a supersonic flow into a subsonic one. The accepted system of flow is confirmed by experiment. There is shown the possibility of reflecting an incident jump in condensation from the axis of symmetry without the formation of a subsonic flow. (Author)

METALLURGY

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 75 (METALLURGY SERIES). 26 June 63, 26p. JPRS: 19871.
Order from OTS $0.75 63-31123

Trans. of selected abstracts from Referativnyi Zhurnal. Metallurgiya (USSR) 1963, nos. 2, 4-5, 7-8 and 1963, no. 2.

DESCRIPTORS: *Metallurgy, *Abstracts, *China, Rolling mills, Metallography, Phase transitions, Industrial production, Rare earth elements, Welding, Theory, Iron, Steel.

DEVELOPMENTS IN USSR POWDER METALLURGY. 22 July 63, 39p. 20 refs. JPRS: 20277.
Order from OTS $1.25 63-31343

Trans. of Poroshkovaya Metallurgiya (USSR) 1963 [v. 3] no. 1, p. 3-12, 93-111.

DESCRIPTORS: *Industrial production, *Powder metallurgy, Materials, Furnaces, Design, Alloys, Vehicle wheels, Gears, Manufacturing methods.

Contents:
Possibilities and problems of powder metallurgy in the development of new materials, by I. M. Fedorchenko
New designs for reduction furnaces in the production of hard alloys, by V. N. Mel'nikov and others
A progressive method of producing gear wheels, by V. A. Krokha and A. M. Bakhovkin.

Ardenne, M. von.
HIGH MELTING BY THE DRESDEN ELECTRON BEAM MULTICHAMBER PROCESS. June 63.
Order from BISI £4 15s BISI-3192

Trans. of Freiberger Forschungshefte. [Reihe] B. [Huttenwesenmetallurgie] (West Germany) 1962, v. 68, p. 5-18.

DESCRIPTORS: *Steel, *Furnaces, *Electron beams, Design, Melting, Processing.

Barbieri, T.
ANALYSIS OF THE PERFORMANCE OF BLAST FURNACE NO. 3 WORKING WITH A SLAG VOLUME OF 275 kg/t OF PIG IRON AT "OSCAR SIMIGAGLIA" WORKS OF ITALSIDER (GENOVA-CORNIGLIANO). June 63.
Order from BISI £1 15s BISI-3035

Trans. of mono. Journées Internationales de Sidérurgie, Luxembourg, 1-4 Oct 62. [Proceedings] p. 302-310.

DESCRIPTORS: *Blast furnaces, Slags, Iron alloys, Castings, Tests, Metallurgical analysis.

Berneron, R.
GAS ANALYSIS IN METALS BY EMISSION SPECTROGRAPHY. July 63.
Order from BISI £2 15s BISI-3291

Trans. of Centre de Documentation Siderurgique. Circulaire d'Informations Techniques (France) 1963, v. 20, no. 3, p. 743-748.

DESCRIPTORS: *Gas analysis, Metals, Spectrographic analysis, Emissivity, Heat transfer.

Bogdanov, O. S.
DETERMINATION OF THE SIZE OF AIR BUBBLES IN THE PULP OF FLOTATION MACHINES [Opredelenie Krupnosti Vozdushnykh Puzyr'kov v Pul're Flotatsionnykh Mashin]. [1963] 7p.
Order from OTS or SLA $1.10 63-14544

Trans. of Tsvetnye Met[ally] (USSR) 1947, v. 20 [no. 2] p. 23-25.

DESCRIPTORS: Machines, *Flotation (Separation), *Bubbles, *Air.

Chauzat, P., Reveil, C. and others.
PNEUMATIC INJECTION OF DRY COAL IN NO. 2 BLAST FURNACE OF THE COMPAGNIE DES HAUTS FOURNEAUX AT CHASSE, FRANCE. June 63.
Order from BISI £5 BISI-3171

Trans. from mono. Journées Internationales de Sidérurgie, Luxembourg, 1-4 Oct 62. [Proceedings].

DESCRIPTORS: *Blast furnaces, *Coal, Injection, *Pneumatic servomechanisms, *Coke, France.

Crome, R.
NON-DESTRUCTIBLE TESTING OF BARS AND TUBES IN ALTERNATING MAGNETIC FIELDS. June 63.
Order from BISI £3 15s BISI-3225

Trans. of Bänder, Bleche, Rohre (West Germany) 1963 [no. 1] p. 16-21.

DESCRIPTORS: *Magnetic fields, Alternating current, *Pipes *Rods, *Non-destructive testing, Wire, Circuits, *Automation.

Domanski, Wladyslaw.
CHEMICAL ACTION OF CHLORINE AND ITS COMPOUNDS ON METALS AND METALLIC OXIDES. [1963] 15p. (figs. tables omitted) 15 refs.
Order from SLA $1.60 63-14209

Trans. of Archiwum Gornictwa i Hutnictwa (Poland) 1955, v. 3, no. 3, p. 401-435.

DESCRIPTORS: Metals, Oxides, *Lead, *Zinc, *Alkali metals, Purification, Chlorination, *Chlorine, *Hydrochloric acid.

Dumont-Fillon, J., Mangin, F. and others.
CONTINUOUS MONITORING OF THE CARBON CONTENT OF THE BATH IN REFINING PROCESSES WITH PURE OXYGEN. June 63.
Order from BISI £4 BISI-3283

Trans. of Revue de Métallurgie (France) 1963, v. 60 [no. 2] p. 105-113.

DESCRIPTORS: *Oxygen, *Refineries, *Carbon, Chemical analysis, Monitors, Gas flow, Metallurgical laboratories.

Glanert, G., Striegel, H., and Richter, G.
THE INFLUENCE OF INCREASED SULPHUR CONTENT IN THE BURDEN ON THE OPERATION OF A BLAST FURNACE. June 63.
Order from BISI £4 5s BISI-3250

Trans. of Neue Hutte (East Germany) 1962, v. 7 [no. 11] p. 658-664.

DESCRIPTORS: *Blast furnaces, Operation, Coke, *Sulfur, Slags, Iron alloys, Castings, Metallurgical laboratories.

Gruzinov, V. K.
PRACTICAL PROCESSES FOR CONTROLLING THE GAS STREAM. July 63.
Order from BISI £5 BISI-3285

Trans. of French translation of mono. [Upravlenie Gazovym Potokom v Domennoi Pechi Programmnoi Zagruzkoi (Regulation of the Gas Stream in Blast Furnaces by Means of Charging Control) Sverdlovsk, 1960, pt. 2, chap. 2.

DESCRIPTORS: *Gas flow, *Blast furnaces, Control, *Coke.

Hasen, M.
THE MOVEMENT OF GAS IN THE BLAST FURNACE STOCK COLUMN. July 63.
Order from BISI £4 5s BISI-3022

Trans. of mono. Journées Internationales de Sidérurgie, Luxembourg, 1-4 Oct 62. Proceedings, p. 58-68.

DESCRIPTORS: *Blast furnaces, *Gases, Motion, Gas flow, Mathematical analysis.

Horstmann, Dietrich.
THE ATTACK OF IRON SATURATED ZINC MELTS ON ALUMINUM CONTAINING IRON. [1963] [10]p. 7 refs.
Order from SLA $1.10 63-16845

Trans. of Archiv fur das Eisenhüttenwesen (West Germany) 1956, v. 27, no. 3, p. 161-163 (Max Planck Institut [für Eisenforschung] (West Germany). [Communication]-657); [Verein Deutscher Eisenhüttenleute (West Germany). Berichte-20].

DESCRIPTORS: *Aluminum, *Iron, *Zinc, Melting, *Fused materials, Chemical analysis.

The attack of iron saturated zinc melts is strengthened by means of very slight aluminum content in the iron up to perhaps 1%. At higher aluminum contents of perhaps 5% the attack is lower than on aluminum free soft iron. The temperature area of the straight line, strengthened attack progressing with time is extended trivally at lower temperatures by aluminum content in the iron. (Author)

Kazennov, Yu. I.
SINGLE PASS WELDING OF 1Cr18Ni9T STEEL WITH A CERAMIC BACKING. [1963] [5]p.
Order from OTS or SLA $1.10 63-16840

Trans. of Avtogennoe Delo (USSR) 1952 [v. 23] no. 8, p. 22-23.
Another trans. is available from LC or SLA mi$1.80, ph*1.80 as 60-17195, DSIR LLU M. 1361 [1960] 2p.

DESCRIPTORS: *Stainless steel, *Welding, Steel, Pipes, *Ceramic materials, Rings, Materials.

Kitaev, B. I., Yaroshenko, J. G., and Lazarev, S. L.
PRESENT STATE OF THE THEORY OF HEAT EXCHANGES IN THE BLAST FURNACE. June 63.
Order from BISI £5 BISI-3168

Trans. of mono. Journées Internationales de Sidérurgie, Luxembourg, 1-4 Oct 62. Proceedings, p. 45-57.

DESCRIPTORS: *Blast furnaces, Heat exchangers, Heat transfer, Theory, Metallurgy.

Krisch, A. and Schweitzer, R.
CHARACTERISTICS OF TENSILE TESTING MACHINES AND THEIR EFFECT ON THE STRAIN RATE AT THE LOWER YIELD POINT. June 63.
Order from BISI £4 15s BISI-3212

Trans. of Stahl und Eisen (West Germany) 1963, v. 83 [no. 5] p. 290-298.

DESCRIPTORS: Machines, *Tensiometers, *Strain gages, *Iron industry, *Steel industry, *Metallography, Metals, Stresses.

Kutateladze, K. S., Zedginidze, E. N., and Nozadze, T. V.
IMMERSION PYROMETERS SHEATHS FOR MEASURING THE TEMPERATURE OF LIQUID METALS. June 63.
Order from BISI £2 10s BISI-3216

Trans. of Ogneupory (USSR) 1962 [v. 27] no. 5, p. 223-225.

DESCRIPTORS: *Liquid metals, Temperature, Measurement, *Pyrometers, Immersion heaters, Metallography.

Livshits, L. S.
THE RELATION BETWEEN THE SOLUBILITY OF CARBON IN FERRITE AND THE TYPE OF CARBIDES FORMED ON TEMPERING. 17 May 63 [7]p. 3 refs. FTD-TT-63-349.
Order from OTS or SLA $1.10 63-23210

Unedited rough draft trans. of #Metallovedenie i Termicheskaya Obrabotka Metallov (USSR) 1962, no. 9, p. 20-22.

DESCRIPTORS: *Carbon, Solubility, *Ferrites, Carbides, Chemical reactions, Steel.

Nikolaenko, E. G.
THE PRESENT STATE AND FUTURE PROSPECTS OF PRODUCTION OF PLANE AND SHAPED COMPONENTS FROM MOLTEN METALS. June 62 [10]p. [DSIR] NLL M. 3946.
Order from OTS or SLA $1.10 63-19921

Trans. of mono. Poluchenie Izdelii iz Zhidkikh Metallov s Uskorennoi Kristallizatsiei [Manufacture of Objects from Liquid Metals by Accelerated Crystallization, Moscow] 1961, p. 5-11.

DESCRIPTORS: *Liquid metals, Metals, Melting, *Geometric forms, *Fused materials.

Opitz, H., Gappisch, M., and König, W.
EFFECT OF OXIDE INCLUSIONS ON THE MACHINABILITY OF Ck 45 STEEL WITH CARBIDE-TIPPED TURNING TOOLS. June 63.
Order from BISI £7 10s BISI-3152

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1962, v. 33 [no. 12] p. 841-851.

DESCRIPTORS: *Carbide tools, Machine tools, *Steel, Machinability, Oxides, Inclusions (Metallurgy), Cutting tools, *Calcium alloys, *Silicon alloys.

Paschal, F. and Himber, F.
STUDY OF THE GAS MOVEMENTS AND THEIR EFFECTS IN THE SHAFT OF THE BLAST FURNACE. July 63.
Order from BISI £7 10s BISI-3023

Trans. of mono. Journées Internationales de Sidérurgie, Luxembourg, 1-4 Oct 62. Proceedings, p. 69-84.

DESCRIPTORS: *Blast furnaces, Shafts, *Gases, Gas flow.

Reynolds, Julian Louis.
ANODE FOR ALUMINA REDUCTION CELL. July 63, 16p. (figs. omitted).
Order from SA $25.00 SA Code-P-159

Trans. of published Japanese patent 8803/1962, cl. 10-D-122.4, appl. no. 37813/1960, filed 13 Sep 60, pub. 20 July 62, by Reynolds Metals Co., U. S. A.

DESCRIPTORS: *Electrolytic cells, *Anodes (Electrolytic cell), Carbon, Design, *Aluminum, Manufacturing methods, Aluminum compounds, Oxides, Electrolysis.

Rivolta, Bruna.
INVESTIGATION OF THE ANODIC BEHAVIOR OF TITANIUM. I. DETERMINATION OF ANODIC VOLTAGES. 2 Dec 62, 13p. (figs. omitted) 14 refs.
Order from SLA $1.60 63-14435

Trans. of la Metallurgia Italiana, 1958, v. 50, p. 173-180.

DESCRIPTORS: *Titanium, Anodes, Electric potential, Electrolytes, Solutions, Electric currents, Corrosion.

The anodic behavior of Ti was investigated in 0.5 N solutions of HCl, NaCl, H_3BO_3, NH_2HSO_3, KOH, Na_2S, NaF, $HClO_4$, and H_2SO_4; the effect of current density and of temperature was also studied. The effect of acidity on NaF solutions was studied using HF, HCl and H_2SO_4 as acidic addenda. In all cases electrode passivation with formation of protective surface layers was observed except in fluorinated solutions. (Author)

Samarin, A. M., Mtschedlischwili, W. A., and Averin, V. V.
CONDITIONS FOR THE DISSOLUTION AND REMOVAL OF OXYGEN DURING THE DEOXIDATION OF METAL MELTS. June 63.
Order from BISI £5 5s BISI-2998

Trans. of Neue Hütte (East Germany) 1962, v. 7 [no. 4] p. 206-213

DESCRIPTORS: Iron, *Deoxidation, Silicon, Aluminum, Reaction Kinetics, Thermodynamics, *Oxygen, Reduction, *Liquid metals.

Sengfelder, George.
PELLETIZING OF DOGGER ORE CONCENTRATE AND SPATHIC ORE FINES. [1963] 9p. (figs. omitted).
Order from SLA $1.10 63-16825

Trans. of Stahl und Eisen (West Germany) 1950, v. 70, no. 18, p. 765-767 (Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-54).

DESCRIPTORS: *Pellets, *Ores (Metal sources), *Grain structures (Metallurgy), Rotary furnaces, Oxides, Oxygen, Reduction.

The formation of wet pellets from fine grained dogger ore concentrate and from spathic fines was carried out, after addition of the required moisture, in an open-ended rotating drum with the use of a small inner heating. It was further recognized that for the preparation of workable prepared pellets with good physical properties, definite temperature range must be maintained, on the one hand to avoid sintering (iron silicate and calcium silicate), and on the other hand, to avoid underdone pellets. Continuous experimental operation up to the preparation of the finished oxidized pellets has been attained. The step-wise arrangement of the burners led to increase of the capacity. Reduction experiments with constant temperature showed clearly the more rapid breaking up of the oxide oxygen as compared with the sintered concentrate. (Author)

Toitot, M. and Roques, C.
DEVELOPMENT OF A MAGNETO-THERMODYNAMIC APPARATUS FOR THE STUDY OF MARTENSITIC TRANSFORMATIONS. Special Technical rept. no. 3, 1 Jan-31 Mar 62, on Contract 073-61-12 RDF. [1962] 23p.
Order from OTS or SLA $2.60 EURAEC-343

Trans. of a rept. from Société des Forges et Ateliers du Creusot [Paris] (France) n.d.

DESCRIPTORS: Laboratory equipment, Transition temperature, Decomposition, *Austenite, *Transformations, *Martensite, Ferromagnetism, Steel, Welds, *Magnetometers, *Temperature sensitive elements.

For the studies of $\gamma \rightarrow \alpha$ transformations, a series of differential dilatometers were utilized for the study of heat treatments on solid pieces. These apparatuses could be utilized up to cooling speeds of 4000°/h. In order to study the transformations on welded joints (base metal and filler metal), corresponding to much higher speeds, it was necessary to develop an apparatus based on the detection of the appearance of a magnetic phase. A detailed description of the apparatus is given. It was possible to attain cooling speeds ranging from 10^{6o}/h (280°/s) to 10^{4o}/h (3°/s). Very rapid heating cycles were achieved as well as very variable maintenance periods. By means of graphical integration, it was possible to calculate the apparent magnetic phase percentage as a function of the temperature.
(See also EURAEC-341)

Ferrous Metals

APPARATUS FOR HIGH-TEMPERATURE MICROGRAPHIC EXAMINATIONS. Special Technical rept. no. 2, 1 Jan-31 Mar 62, on Contract 073-61-12 RDF. [1962] 21p. 5 refs.
Order from OTS or SLA $2.60 EURAEC-342

Trans. of a rept. from Société des Forges et Ateliers du Creusot [Paris] (France) n.d.

DESCRIPTORS: *High-temperature research, *Steel, Austenite, Recrystallization, Transformations, *Phase studies, *Microscopes, Design, Operation, *Metallography.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 106. 5 Apr 63, 51p. JPRS: 18583.
Order from OTS $1.50 63-21525

Trans. of Sovetskaya Geologiya (USSR) 1962, no. 4, p. 9-10; Referativnyi Zhurnal. Gornoe Delo (USSR) 1962, no. 10, items 10B298-10B299; Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 11, p. 3-19; Referativnyi Zhurnal. Tekhnologiya

Mashinostroeniya. B. Tekhnologiya i Oborudovanie Kuznechno-Shtampovochnogo Proizvodstva (USSR) 1963, no. 2, p. 47; and 5 selected articles from Nov 62 issues of 3 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Iron, Ores (Metal sources), Mining engineering, Mine components, Labor, Professional personnel, Ores (Non-metallic), *Powder metallurgy, Sheets, Steel, Heat treatment, Furnaces, Rolling mills, Automatic, Geometric forms, Glass, Lubricants, Metals, Alloys, Deformation.

Contents:
Iron ore reserves of Siberia, by B. M. Kosov
Krivoi Rog mining and concentrating combine increases output, by I. Savitskii
Preparation of a block for mining using the flat bottom chamber method, by V. F. Karyakin
Trench undercutting of chambers at the mines of the KMArud combine, by V. I. Gubkin
Conservatism hampers technical advance in metallurgy, by A. Tselikov
The condition of ferrous metallurgy in the Soviet Union, by V. E. Boiko
Problems of the Dnepropetrovsk industrial region
Zhdanov plant imeni Ilyich hampered by lack of skilled personnel, by T. Nikolaenko and L. Korenevich
The status and prospects for development of ore crushing, pulverization, and concentrating equipment, by N. S. Sason
Heat treatment of low-carbon sheet steel in continuous furnaces, by M. V. Pridantsev and others
The model 1300 automatic blooming mill, by K. N. Valugin and O. P. Sokolovskii
Continuous model 450 rolling mills for very thin-walled profile steel shapes, by V. I. Bairakov
Use of glass as a lubricant in the hot deformation of metals and alloys, by I. Gendlina.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 128. 2 July 63, 23p. JPRS: 19983.
Order from OTS $0.75 63-31180

Trans. of Promyshlennost' Armenii (USSR) 1963 [v. 6] no. 3, p. 15-16 and 12 selected articles from 1963 issues of 7 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Industrial plants, Manufacturing methods, Industrial research, Machines, Ores (Metal sources), Ores (Non-metallic), Steel industry, Metals, Economics, Pipes, Engineering personnel, Electric motors, Labor.

Contents:
Manufacturing method improvements at the Volgorad Red October metallurgical plant, by V. Chernov
Results of cooperation between scientists and metallurgists
Advertisements for sale of machines and products of ore beneficiation
New automated blooming mill at the Ural machine building plant
Vacancies open for laboratory heads at a Gosplan metallurgical institute
Power metallurgy shop at the Vil'nyus fuel equipment plant
We must improve economic connections of Armenia with respect to metal production, by S. Melkumyan
Advertisements for automatic machines and equipment
Advertisement for two variators Bryansk steel mill
We can save 100,000 tons of metal on thin-wall pipes. What impedes their manufacture, by A. Vlasov and M. Tarasenko
Vacancies open for engineers
Asynchronous electric motor needed
Metallurgical workers competition.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 129. 8 July 63, 28p. JPRS: 20053.
Order from OTS $1.00 63-31221

Trans. of Mashinostroitel' (USSR) 1963, no. 5, p. 20; and 17 selected articles from May-June 63 issues of 12 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Electrical equipment, Rolling mills, Ores (Metal sources), *Iron, Sintering, Industrial plants, Wire, Drawing (Machine processing), Excavators, Labor, Geology, Exploration, Construction, Pipes, Mining engineering, Rock (Geology), Oxygen, Electrical equipment, Smelting, Chemical engineering, Quality control.

Contents:
A converter is about to be started, by V. Biryukov
A mill was rebuilt in six days
Continuous-action rolling mill
Agglomerate produced in Kazakhstan
Record set at Kuznetsk combine
Converter shop in Western-Siberian plant
Wire-drawing shop at Beloretsk
Excavator work at Sarbaiskii mine
Award to Kovdorsk beneficiation combine
Success of Dashkesan miners
Treasure under Siberian soil
Construction of Western-Siberian metallurgical plant, by I. Zvezdov
Chelyabinsk tube-rolling plant, by I. Usachev
The Kachkanar ore-concentration combine, by E. Spekhov
Krivoi Rog iron ore for the Severnyi ore concentration combine
Oxygen-converter shop of the Nizhnii Tagil metallurgical combine imeni Lenin, by I. Morozov
Kachkanar ore for Nizhnii Tagil, by F. Selyanin
Metallurgists of Krivoi Rog and Dnepropetrovsk are not satisfied with the quality of agglomerate from Novyi Krivoi Rog ore concentration combine, by S. Akhmatov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 130. 12 July 63, 15p. JPRS: 20144.
Order from OTS $0.50 63-31266

Trans. from Radyans'ka Ukrayina (USSR) 1963, 17 Apr, p. 3; 24 Apr, p. 2; 7 May, p. 1; 14 May, p. 3; 19 May, p. 2.

DESCRIPTORS: *Industrial production, *Metallurgy, *Steel, Chemical industry, Ores (Metal sources) Handling, Ores (Non-metallic), Machines, Automation, Management engineering, Isotopes, Engineering personnel, Pipes, Welding.

Contents:
Steel for the chemical industry, by Ivan Degtyarenko and others
Ore handling problems, by B. Buy
Gosplan Ukrainian SSR on shortcomings in metallurgy, by S. Tishchenko
Ministry of assembly and specialized operations Ukrainian SSR on shortcomings in metallurgy, by G. Bagratuni
Donetskii sovnarkhoz on shortcomings in metallurgy, by M. Gavrilenko
Shortcomings in metallurgical industry management, by Mikhaylo Sushko
Shortcomings in metallurgy (editorial)
Explorer isotopes
Ministry awards degree to engineer I. I. Korobov
Two new pipe welders in action.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 131. 15 July 63, 25p. JPRS: 20178.
Order from OTS $0.75 63-31289

Trans. of 17 selected articles from May-June 63 issues of 9 Soviet newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Rolling mills, *Corundum, *Boilers, Awards, Oxygen, Electrical equipment, Mining engineering, Construction, *Steel, *Pipes, Ores (Metal sources), Shock waves, Blast, Oils, Industrial plants, *Iron alloys, Space probes, Industrial equipment, Vibration.

Contents:
New rolling mill at the Zaporozhstal' plant
Corundum produced at Chelyabinsk electro-metallurgical combine
Assembly completed of a powerful waste-heat boiler at Nizhnii Tagil metallurgical combine imeni Lenin
Work done by party men among workers of Chelyabinsk electrometallurgical combine, by V. Gusarov
Incorrect distribution of award money at Krivorozhstal' plant, by G. Artemchuk
New oxygen converter shops at Nizhnii Tagil and other metallurgical plants
Chelyabinsk metallurgical plant builds a new blooming mill
Construction and modernization of metallurgical and mining enterprises
Construction of new Annovskii open-pit mine
Trubostal' (steel pipe) plant
Major agglomerate factory at Kachkanar
New blasting methods at Sokolovsko-Sorbaiskii ore-benefication combine
Novomoskovskii metallurgical plant produces additional oil pipes
Construction of the new Zestafoni ferro-alloy shop is behind schedule, by O. Babuadze and V. Grachev
Five years of red tape hold up construction of gigantic planetary machine at Seversk metallurgical plant, by N. Redin and others
Excessive vibration of new mining equipment, by I. Zenin
Kremenchug Magnitika in operation.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 132. 17 July 63, 34p. JPRS: 20201.
Order from OTS $1.00 63-31301

Trans. of Nedelya (USSR) 1963, no. 20, p. 5 and 24 selected articles from 1963 issues of 10 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Blast furnaces, Construction, Maintenance, Automation, Studs, Iron industry, Steel industry, Training, Economics, Industrial plants, Ores (Metal sources), Conferences, Personnel, Smelting, Management engineering, *Steel, Furnaces, Tin, Plating, Oxygen, Electrical equipment, Pipes, Industrial research, Electric welding.

Contents:
New construction in Zheleznogorsk
Speed-up in blast furnace overhauling
Nail-making mechanization
Iron and steel production in the Ukrainian SSR
On-the-job training in economics
The Cherepovetskii metallurgical plant
New agglomerate plant in Kazakhstan
The Cherepovetskii metallurgical plant
The Kachkanar ore enrichment combine
Conference of ferrous metallurgy party workers
Steel smelting units in 1963
New ore find in the Angara river region
Mismanagement in Chelyabinsk, by P. Semenov
500,000 tons of steel from a single furnace, by S. Vavilov
Mismanagement at the Novolipetskii metallurgical plant, by A. Lazutin
Malfeasance in tinplating shop construction
New oxygen converter at Nizhnetagil'skii plant, by V. Belyaev
Large-diameter pipe production
Large-diameter pipe production
New agglomeration factory in Magnitogorsk
Tamir-Tau Kazakhstanskaya plant
Leningrad Metallokombinat plant
New steel developed by institute
Chelyabinsk "1020" electric pipe-welding mill
Karaganda metallurgical plant readies agglomeration factory.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 134. 22 July 63, 11p. JPRS: 20283.
Order from OTS $0.50 63-31347

Trans. of Nauka i Zhyttya (USSR) 1963 [v. 13, no. 1] p. 29-31, 34-35.

DESCRIPTORS: *Industrial production, *Metallurgy, Electroslag process, *Steel, Vacuum apparatus, Industrial plants, Blast furnaces, Automation, Machines, Construction.

Contents:
The electroslag and vacuum treatment methods of steel production, by O. Brodskii and L. Maryushkin
How the Enakievka metallurgical plant started producing semi-killed steel, by M. Myshetskii
Automating a blast furnace at the Zhdanov Azovstal' plant, by M. Kashanskii
A visit to the Novo-Kramatorsk machine building plant, by P. Ivanov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 135. 23 July 63, 20p. JPRS: 20304.
Order from OTS $0.75 63-31360

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 25(98) p. 11-12, 43, 45-47.

DESCRIPTORS: *Industrial production, *Metallurgy, Industrial plants, Economics, Personnel, Propaganda, Machines, Management engineering, Iron alloys, Industrial equipment, Agricultural machinery, Small tools.

Contents:
Main trends in Soviet ferrous metallurgy, by V. Nakoryakov
Innovations at Zaporozhstal' plant, by V. Nakoryakov
Economic aspects of metallurgical industry and the part played by party organizations, by V. Nakoryakov
Forms and methods of working with people, by V. Nakoryakov
Party work in seeking and using reserves at metallurgical plants, by V. Nakoryakov
Idle teeming machine at Kuvshinovo metallurgical plant
Exaggerated management personnel at the Almaznaya ferro-alloy plant
"For sale" and "wanted" advertisements for industrial and agricultural machines
Milling cutters sold by Salda plant.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 136. 24 July 63, 19p. JPRS: 20323.
Order from OTS $0.75 63-31369

Trans. from Stroitel'naya Gazeta (USSR) 1963, 5 May, p. 1; 10 May, p. 1, 2; 12 May, p. 1; Vechernaya Moskva (USSR) 1963, 6 Apr, p. 1.

DESCRIPTORS: *Industrial production, *Metallurgy, Iron, Foundries, Industrial plants, Rods, Manufacturing methods, Oxygen, Electrical equipment, Construction, Coke, Sintering, Blast furnaces, Open hearth furnaces, Chromium compounds, Oxides, Titanium compounds, Electrodes, *Conferences, Engineering personnel, Labor.

Contents:
Production of bathtubs by Kirov iron foundry
"250"-2 continuous rod mill goes into operation at Makeevka metallurgical plant imeni S. M. Kirov
Course of construction of oxygen-converter shops in Nizhnii Tagil and Zhdanov
Chereprovets superload-capacity coke battery started
Progress in construction of new facilities at Magnitka, by G. Markovich
New sintering mill, blast furnace, open-hearth furnace, and chromium compounds plant for Orsk-Khalilovo metallurgical combine, by M. Dunenkov
Rutile-coated electrodes
Conference of engineers, technicians, and leading workers of Donmashstroi trust, by A. Lemberger
Status of construction in Dnepropetrovskaya oblast, by V. Kotovshchikov
New developments at Novokuznetsk Stroiindustriya trust, by B. Gershun.

Agre, V. L. and others.
THE PRODUCTION OF PIPE IN THE USSR. 17 June 63, 160p. JPRS: 19703.
Order from OTS $3.00 63-31049

Trans. of mono. Tekhnicheskii Progress v Chernoi Metallurgii SSSR: Prokatnoe i Trubnoe Proizvodstvo (Technical Progress in USSR Ferrous Metallurgy: Rolling and Pipe Production) Moscow, 1962, p. 121-245.

DESCRIPTORS: *Pipes, *Steel, Hot-working, Cold-working, Drawing (Machine processing), Welding, Brazing, Coatings, Corrosion inhibition, Zinc coatings, Industrial production, Industrial plants, *Rolling mills, Industrial equipment, Alloys.

Topics include: General data on the production of steel pipes in the USSR; production of hot-rolled seamless pipes; production of pipes by cold rolling and cold drawing; production of welded and brazed pipe; and corrosion-resistant coverings for pipes.

Carlström, C. G. and Pälvarinne, V.
PHOTOMETRIC DETERMINATION OF BISMUTH IN STAINLESS STEEL AND FERRO-MOLYBDENUM. July 63.
Order from BISI 42 5s BISI-3309

Trans. of Jernkontoret [Stockholm]. Annaler (Sweden) 1962, v. 146, no. 6, p. 453-461.

DESCRIPTORS: *Bismuth, *Stainless steel, Iron alloys, Molybdenum alloys, *Photometers.

Donzé, M.
REMOVAL OF SURFACE CRACKS WITH THE CUTTING TORCH. July 63.
Order from BISI 4 15s BISI-3276

Trans. of Centre de Documentation Sidérurgique. [Circulaire d'Informations Techniques] (France) 1962 [v. 19] no. 5, p. 1259-1276.

DESCRIPTORS: *Cutting tools, *Torches, *Surfaces, *Crazing, *Steel, Rolling mills, Automatic, Separation, Fracture (Mechanics).

Gruzin, V. G.
POURING TEMPERATURE AND HOT TEARING, tr. by R. C. Murray. Paper from All-Union Conference on the Continuous Casting of Steel (no. 1) [17-19] Oct 55. Aug 57 [13]p. 15 refs. [BISI] Trans. 609; [Trans. no. 4497] [DSIR] NLL M.4142.
Order from OTS or SLA $1.60 62-24149

Trans. of mono. [Nepreryvnaya Razlivka Stali (The Continuous Casting of Steel)] Moscow, 1956, p. 252-260.

DESCRIPTORS: Temperature, *Steel, Steel castings, Molding, Hot working, *Fracture (Mechanics).

The hot tearing (cracking) resistance of ferrous alloy castings depends on the temperature at which they are poured. The resistance was raised by pouring at the liquid temperature, at which solidification commences.

As the pouring temperature was increased above the liquid temperature, there was a decrease in the hot tearing resistance of carbon and low-alloy pearlitic and austentitic steels and of white and grey irons cast with a chilled surface. The solidifying thin parts shrank and tore the massive parts, still mostly in a solid-liquid state. The hot tearing resistance of carbon and low-alloy pearlite steels decreased as the temperature of pouring below the liquid decreased. The resistance at various temperatures is related to the thickness of the solid shell and the shrinkage forces acting upon the casting.

Horn, H. and Kendler, E.
A NEW TYPE OF COMBUSTION PROCESS FOR THE PRECISE DETERMINATION OF SULPHUR IN FOUNDRY PIG IRON. July 63.
Order from BISI £2 15s BISI-3267

Trans. of Neue Hütte (East Germany) 1963, v. 8, [no. 1] p. 31-35.

DESCRIPTORS: *Iron alloys, *Castings, Foundries, *Sulfur, Chemical analysis, *Combustion.

Jansen, W.
ON THE REDUCTION OF TRICALCIUM PHOSPHATES. [1963] 12p. (figs. omitted) 25 refs.
Order from SLA $1.60 63-16232

Trans. of Zeitschrift für Anorganische und Allgemeine Chemie (Germany) 1933, v. 210, no. 2, p. 113-124.

DESCRIPTORS: *Calcium compounds, *Phosphates, Reduction (Chemistry), *Iron, Iron compounds, Carbon compounds, Oxides, Hydrogen, Carbon, Graphite, Blast furnaces.

The purpose is to investigate the reducibility of the tricalcium phosphate alone and in the presence of iron by carbon oxide, hydrogen and carbon in the nitrogen current since the phosphorus in the form of tricalcium phosphate together with the iron phosphate and iron ores arrive as components at the blast furnaces. (Author)

Kochendorfer, A.
STRESS STATE IN NOTCHED SPECIMENS AND ITS SIGNIFICANCE FOR BRITTLE FRACTURE TEMPERATURE OF STRUCTURAL STEELS. [1962] 14p.
Order from ATS $24.75 ATS-32P61G

Trans. of Acta Technica (Hungary) 1961, v. 35/36, p. 219-236.

DESCRIPTORS: *Steel, Stresses, Brittleness, Fracture (Mechanics), Temperature

Kostyakov, V. N. and Erinov, A. E.
OXIDATION AND DECARBURISATION OF STEEL IN AIR FURNACES WITH PARTIAL BURNING OF NATURAL GAS. June 63.
Order from BISI £4 BISI-3229

Trans. of Kuznechno-Shtampovochnoe Proizvodstvo (USSR) 1963 [v. 5, no. 1] p. 29-32.

DESCRIPTORS: *Steel, *Oxidation, Carbon, Chemical reactions, Air, Furnaces, *Natural gas.

Maksimov, S. K., Skakov, Yu. A. and others.
ROLE OF PHASE COMPOSITION DEPOSITS IN MAGNETIC AGING OF MILD STEEL (Rol'Fazovogo Sostava Vydelenii v Magnitnom Starenii Myagkoi Stali). [1963] [8]p. (foreign text included) 6 refs.
Order from OTS or SLA $1.10 63-16388

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Chernaya Metallurgiya (USSR) 1962, no. 3, p. 122-124.

DESCRIPTORS: *Steel, Phase studies, Iron alloys, Nitrogen, Deposits, Chemical analysis, Magnetic properties, Aging (Materials).

The connection between the intensity of the magnetic aging by the absolute value of H_c and the phase composition of the deposit was established. The retarding of the magnetic aging is not so much related to the approximation of the dimensions of the deposit to the critical magnitude as to the transformation of $Fe_{16}N_2 \rightarrow Fe_4N$. The least aging effect and H_c is observed by the previous (early) formation of stable nitride Fe_4N. The stabilizing treatment of electrotechnical steel should consist in the creation of the conditions assuring the fullest deposition of nitrogen in the stable form. (Author)

Pohl, H.
A PHOTOMETRIC DETERMINATION OF ZINC IN IRON ORE. June 63.
Order from BISI £2 5s BISI-3286

Trans. of Zeitschrift für Erzbergbau und Metallhüttenwesen (West Germany) 1963 [v. 16, no. 1] p. 18-21.

DESCRIPTORS: *Ores (Metal sources), *Zinc, Photometers, *Iron alloys, *Photographic analysis, *Castings, Material separation.

Portevin, P. A.
THE EFFECT OF VARIOUS TRACE ELEMENTS ON THE FORGEABILITY OF HALF-HARD STEEL. June 63.
Order from BISI £10 BISI-3182

Trans. of Revue de Métallurgie (France) 1962, v. 59 [no. 11]p. 815-951; [no. 12] p. 1043-1054.

DESCRIPTORS: *Steel, *Forging, *Tracer studies, Microstructure, Aluminum, Deformation, Tensile properties.

Reimann, M., Sieckmann, W., and Schabio, F.
PRODUCTION, PROPERTIES AND TESTING OF PLASTIC COATED STEEL STRIP. July 63.
Order from BISI £6 15s BISI-3241

Trans. of Stahl und Eisen (West Germany) 1963, v. 83 [no. 6] p. 317-327.

DESCRIPTORS: *Steel, *Plastic coatings, Production, Polyvinyl chloride.

Schenck, H. and Küpperbusch, H.
INVESTIGATIONS OF THE CONDITIONS OF FORMATION OF TECHNICALLY USEFUL OXIDE LAYERS. July 63.
Order from BISI £5 10s BISI-3195

Trans. of Stahl [und] Eisen (West Germany) 1963, v. 83, no. 3, p. 154-162.

DESCRIPTORS: *Oxides, Oxygen, *Wustite, *Steel, Heat treatment, *Insulating materials, Thin films.

Schiffermüller, R[ichard].
DETERMINATION OF THE PERMEABILITY OF POWDERED IRON RING CORES [Bestimmung der Permeabilität von Eisenpulver-Ringkernen]. [1962] 4p. (figs. formulae refs. omitted).
Order from SLA $1.10 62-18687

Trans. of Elektrotechnik und Maschinenbau (Austria) [1946] v. 63, no. 11/12, p. 254-256.

DESCRIPTORS: *Iron, Powders, Metal powders, Powder metallurgy, Permeability, Chemical analysis, Rings, Ferrite cores.

Schulepnikova, A. G.
ABRASIVE WEAR AND THE MICROSTRUCTURE OF STEEL. [1963] 4p. (figs. tables omitted) 1 ref.
Order from OTS or SLA $1.10 63-16537

Trans. of #Metalloved[enie] i Term[icheskaya] Obrabotka Metal[lov] (USSR) 1962, no. 10, p. 5-8.

DESCRIPTORS: *Steel, Microstructure, Friction, *Abrasives.

The durability of steel subjected to wear by iron ore and agglomerates was investigated. The obtained data make it possible to assume that the alloyed hard solution resists better abrasive wear, than the ferrito-carbide mixture of the same composition and hardness. The use of cast alloyed high carbon steels in form of weldings raises the wear resistance of the working surfaces of machine parts.

Thanheiser, Gustav.
ON THE CAUSE OF BUBBLE FORMATION IN THE PICKLING OF CARBON STEEL BY HYDROGEN DIFFUSING INTO IT. [1963] 6p. 3 refs.
Order from SLA $1.10 63-16863

Trans. of Zeitschrift für Technische Physik (Germany) 1929 [v. 10] no. 4, p. 143-146.

DESCRIPTORS: *Hydrogen, Diffusion, *Steel, Carbon, Pickling, Bubbles.

Tikhomirov, V. I., Gofman, I. A., and Ipat'ev, V. V.
OXIDATION RATE OF IRON AND STEAM IN CARBON DIOXIDE GAS AT HIGH TEMPERATURES. July 63.
Order from BISI £6 5s BISI-3198

Trans. of Leningrad U. Uchenye Zapiski (USSR) 1954, no. 175, p. 21-35.

DESCRIPTORS: High temperature research, Gases, *Carbon dioxide, *Steam, *Iron, *Oxidation, Reaction kinetics.

Tseitlin, A. B., Petukhov, G. K., and Sorokin, V. S.
PROSPECTS FOR APPLYING STEAM-EJECTOR VACUUM PUMPS IN METALLURGY [AND] EXPERIENCE IN THE USE OF A STEAM-EJECTOR PUMP FOR LADLE DEGASSING OF STEEL. 26 June 63, 13p. 6 refs. JPRS: 19868.
Order from OTS $0.50 63-31120

Trans. of #Stal' (USSR) 1963 [v. 23] no. 4, p. 374-378.

DESCRIPTORS: *Steel, Degasification, Pumps, Ejectors, Steam, *Metallurgy, *Vacuum pumps, Industrial equipment.

Wiethoff, G., Dörr, W., and Friedrich, H.
OPERATING RESULTS WITH THE NEW ELECTRONIC TEEMING CRANE SCALES AT HOERDE STEELWORKS. June 63.
Order from BISI £8 10s BISI-3209

Trans. of Stahl und Eisen (West Germany) 1963, v. 83 [no. 4] p. 213-219.

DESCRIPTORS: *Steel industry, Balances, Hoists, Electronic equipment, Economics.

Light Metals

COMPARATIVE EXPERIMENTS ON THE VELOCITY WITH WHICH VARIOUS CALCIUM ALLOYS TAKE UP NITROGEN. 8 Dec 48, 4p. 2 refs.
Order from OTS or SLA $1.10 63-10969

Trans. from unidentified German mono. pub. by I. G. Farbenindustrie, A.G.; Griesheim, n.d. (PB-70493D).

DESCRIPTORS: *Calcium alloys, *Nitrogen, Absorption, Velocity, Pressure, *Sodium alloys, *Barium alloys, Lithium alloys, Potassium alloys, Aluminum alloys.

Experiments were undertaken with the purpose of increasing the absorption velocity of calcium for nitrogen by the addition of other metals to the calcium. The results confirmed the statements in the literature that pure calcium reacts extremely slowly and that sodium has a strong activating effect. Further investigation showed that aluminum decreases with absorption velocity of previously activated calcium. Barium, alone and together with lithium, had no activating effects. Potassium was also ineffective. On the other hand, the addition of barium to calcium-sodium alloy had so intense an activating effect that the alloy burned in nitrogen with a free flame. (Author)

Chesnokov, A. S. and Kuz'min, Yu. P.
THE EFFECT OF GAS-ELECTRIC CUTTING ON THE PROPERTIES OF ALUMINUM ALLOYS. [1963] 7p.
Order from ATS $8.00 ATS-60Q69R

Trans. of # Svarochn[oe] Proizv[odstvo] (USSR) 1962, no. 12, p. 25-28.

DESCRIPTORS: *Aluminum alloys, *Cutting tools, *Gases, Electrical equipment.

Nonferrous (except light) Metals

SODIUM ELECTROLYSIS AND THE LEAD CATHODE CELL. Minutes of a meeting held at I. G. Farben, Höchst, 8 Mar 43. [1963] [3]p.
Order from OTS or SLA $1.10 63-14814

Trans. from mono. (report) of I. G. Farbenindustrie, A.G., Frankfurt A.M., n.d. (PB-73504).

DESCRIPTORS: *Sodium, Production, Electrolysis, Sodium alloys, *Lead alloys, Electrolytic cells, Design, *Cathodes (Electrolytic cell), Lead.

USSR INDUSTRIAL DEVELOPMENT: SOVIET NONFERROUS METALLURGY NO. 66. 20 June 63, 46p. JPRS: 19769.
Order from OTS $1.25 63-31083

Trans. of Narodnoe Khozyaistvo Kazakhstana (USSR) 1963 [v. 21] no. 1, p. 74-75; no. 2, p. 4-7, 9, 12; and 12 selected articles from 1963 issues of 8 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, *Mining engineering, Lithium, Rubidium, Cesium, Beryllium, Management engineering, Personnel, Tellurium, Separation, Impurities, Lead, Asbestos, Electricity, Transportation, Industrial plants, Construction, Titanium, Wollastonite, Power, Economics, Clay minerals, Copper, Molybdenum, Cables, Mines, Copper, Smelting, Metals.

Contents:
Achievement of Leninogorsk mine and inadequacies in the supply of the mine quarry, by N. Ten and R. Letova
The importance of creating reserves of lithium, rubidium, cesium, and beryllium, by E. Ovcharenko
Shortcomings in the production process of the Ziryanovsk beneficiation combine in the Kazakh SSR, by V. Antonov
Achievements of Kounrad mining combine due to the work of rationalizers, by P. Matyushin
Extraction of tellurium during the separation of impurities from lead, by F. Kedrov
The Dzhetigara asbestos combine is being built
High cost of electricity and transportation problems thwart production at Shelekhovo aluminum plant, by T. Panzhin
Production of metallic titanium and construction of specialized combine near Ust'-Kamenogorsk
Wollastonite production must be organized in Uzbek SSR, by I. Gorskin
Achievements in aluminum production and power saving during pre-electoral campaign at Kanaz plant in the Armenian SSR, by L. Arutyunyan
Increase in kaolin production in the Ukrainian SSR
Construction of the Agarak copper and molybdenum combine
Copper scale turned into power would mean great saving at Erevan cable plant, by V. Aivazyan
Review of the meeting of the leaders of the nonferrous metallurgy and mining industry sovnarkhoz, by G. Nuridzhanyan
Construction of Ziryanovsk mine to be completed by the end of 1965
Reasons for the inadequate rate of construction of the Ziryanovsk mine, by A. Bekreshev and Ya. Kalinichenko
Achievements of the copper-smelting plant of Irtishskii polymetallic combine and alarming situation in 1963, by K. Artamonov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET NONFERROUS METALLURGY NO. 69. 8 July 63, 7p. JPRS: 20047.
Order from OTS $0.50 63-31217

Trans. of 6 selected short articles and news items from Mar, May-June 63 issues of 12 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Aluminum, Industrial plants, Hydrates, Potassium, Mines, Igneous rock, Mining engineering, Copper, Lead, Zinc, Industries, Gold, Tin, Antimony, Chromium, Nickel, Metals, Minerals.

Contents:
Azerbaidzhan aluminum plant and alunite mine
Copper mining enterprises
Operations in the lead and zinc industries
Gold placer mines, tin combines
Developments in the antimony, chromium, nickel, and polymetals industries
Nonferrous organizations, nonmetallic minerals.

USSR INDUSTRIAL DEVELOPMENT: SOVIET NONFERROUS METALLURGY NO. 70. 16 July 63, 62p. JPRS: 20186.
Order from OTS $1.75 63-31294

Trans. from Kommunist, Erevan (USSR) 1963, 17 May, p. 2; 26 May, p. 1; 28 May, p. 1, Sovetskaya Rossiya (USSR) 1963, 1 June, p. 1; 2 June, p. 2; Kazakhstanskaya Pravda (USSR) 1963, 4 June, p. 2; Pravda, Moscow (USSR) 1963, 25 May, p. 3; Pravda Ukrainy (USSR) 1963, 11 June, p. 2; Sovetskaya Kirgiziya (USSR) 1963, 7 June, p. 2.

DESCRIPTORS: *Industrial production, *Metallurgy, Copper, Molybdenum, Industrial plants, Tin, Deposits, Smelting, Lead, Zinc, Ores (Metal sources), Construction, Labor, Diamonds, Economics.

Contents:
The Agarak copper-molybdenum combine
The new Agarak copper-molybdenum combine, by M. Malkhasyan
Data on the Agarak copper-molybdenum combine, by S. Vartan'yants
Progress of the Kafan copper combine, by M. Grigoryan
The Solnechnoe tin deposit and smeltery, by I. Grebtsov
Copper-lead-zinc ore reserves of the Gornyi Altai, by A. Ershov
Construction lags at Dzhezkazgan, by L. Razumovskaya
Obnoxious foreman at Novokuznetsk plant, by F. Kuznetsov
Difficulties of introducing industrial diamonds, by G. Kondratenko
Economic classes for Kansk ore producers, by V. Korenskoi.

USSR INDUSTRIAL DEVELOPMENT: SOVIET NONFERROUS METALLURGY NO. 71. 22 July 63, 33p. JPRS: 20281.
Order from OTS $1.00 63-31345

Trans. of 15 selected articles from 1963 issues of 11 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Minerals, Industrial equipment, Electric power production, Industrial plants, Steam turbines, Construction, Clay minerals, Deposits, Pearlite, Mining engineering, Copper, Smelting, Molybdenum, *Aluminum, Cutting tools, *Heat resistant metals and alloys.

Contents:
Expanding the mineral wealth and industry of Orenburgskaya oblast, by V. Proletkin
Various equipment offered for sale
Air distributors and steam turbine electric power stations for sale
Building the concentrating mill in Dzhezkazgan
Using Uzbek kaolin for the production of aluminum
Exploitation of Sayak nonferrous metals deposit, by I. Smolyar
Quarrying pearlite in Armenia
Affiliate of polytechnic institute needed in Kafan, by A. Aruthynyan and others
Various equipment offered for sale by Kirovograd copper-smelting combine
The Agarak copper-molybdenum combine starts in operation, by A. Shkulev
The Rudnyi Altai as a major Soviet base of nonferrous metallurgy, by G. Gel'fand
Improve the quality of production at the Kanakerskii aluminum plant
Improve the quality of production of hard alloys, by V. Ivensen
The metallurgy of ultra-pure substances, by N. Sazhin
Exploiting the production potential at the Bogoslovskii aluminum plant, by S. F. Kononov.

Gilbert, H. N.
METHOD FOR THE PREPARATION OF LEAD AND ALKALI METAL CONTAINING ALLOYS. [1963] 3p.
Order from OTS or SLA $1.10 63-14819

Trans. of Ger[man patent] 714, 456, 29 Nov 41, by E. I. du Pont de Nemours & Co.

DESCRIPTORS: *Lead alloys, *Alkali metal alloys, Chlorides, Electrolysis, Fused materials, Cathodes (Electrolytic cell), Distillation, Material separation.

Lezgintsev, G. and Novozhilov, B. F.
SYNTHETIC DIAMOND INDUSTRY [AND] QUALITY OF NON-FERROUS METAL ORES AND PRODUCTION PROFITABLENESS. USSR Industrial Development. Soviet Nonferrous Metallurgy No. 68. 26 June 63 [17]p. JPRS: 19854.
Order from OTS $0.50 63-31109

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 17[90] p. 11 and of Gornyi Zhurnal (USSR) 1963, no. 4, p. 26-31.

DESCRIPTORS: *Synthetic stones, Industrial production, *Gems (Minerals), Quality control, Economics, *Diamonds, *Ores (Non-metallic), *Ores (Metal sources).

Mikhina, V. N., Orlova, S. I. and others.
OBTAINING CHROMIUM BY ELECTROLYSIS OF ITS CHLORIDE IN MOLTEN MEDIA, tr. by Glen C. Ware. Mar 63 [11]p. 20 refs.
Order from OTS or SLA $1.60 63-19036

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1962, v. 35, no. 9, p. 2093-2099.

DESCRIPTORS: *Chromium, *Chromium compounds, *Electrolysis, *Chlorides, Fused materials, Electric furnaces, *Electrochemistry, Electrolytic cells.

Research was performed on the conversion of water-free chromium chloride to metallic chromium by electrolysis in a melt. A greater productive capacity and lower consumption of electric energy were achieved by using a molten media instead of a water solution. An electrolyzer was improved to eliminate chlorination on the cathode metal. The design and operation of an earlier type of electrolyzer were compared to that of the improved apparatus, which prevented secondary oxidation-reduction reactions and increased the yield of chromium to a current efficiency of 86%.

Specketer, Heinrich.
SOME METHODS FOR THE PREPARATION OF ALKALI METALS BY AID OF CALCIUM CARBIDE AND ALUMINUM. [1963] 5p.
Order from SLA $1.10 63-16157

Trans. of German language article from unidentified source, n.d.

DESCRIPTORS: *Alkali metals, *Potassium, *Sodium, Calcium compounds, *Carbides, Aluminum, Fluorides, Alloys, Lead alloys, Sodium alloys, Chlorides, Chemical reactions.

Winnacker, Hass and others.
CONFERENCE ON SODIUM ELECTROLYSIS, AT HOCHST 5 MAR 43. [1963] [1]p.
Order from OTS or SLA $1.10 63-14817

Trans. from mono. (report) of I. G. Farbenindustrie, A.G., Frankfurt A.M. n.d., (PB-73504).

DESCRIPTORS: *Sodium, Production, Electrolysis, *Electrolytic cells, Design, *Conferences.

A discussion on the Heydebreck and the Gersthofen processes for the preparation of sodium.

Structural Metallurgy and Corrosion

Bastien, P. and Colombie, M.
OXIDATION OF IRON AND STEELS BY CARBONIC ANHYDRIDE WITH HEAT AND UNDER PRESSURE (Oxydation du Fer et des Aciers par l'Anhydride Carbonique à Chaud et sous Pression). [1963] [19]p. (foreign text included) 13 refs.
Order from SLA $1.60 63-14078

Trans. of Rev[ue] de Métallurg[ie]. Mémoires Scientifiques (France) 1962, v. 59, no. 6, p. 454-460.

DESCRIPTORS: *Iron, *Steel, Oxidation, *Corrosive gases, *Carbonic acids, Anhydrides, Heat, Pressure, Corrosion, Reaction kinetics, Whiskers (Crystallography), Microstructure, X-ray diffraction analysis.

The pressure of the oxidant gas has an influence on the phenomenon of corrosion of iron and steels by carbonic anhydride. This oxidation reaction is tributary to the local reactions at the oxide-gas interface. There is a fundamental difference between corrosion by CO_2 and corrosion by oxygen. This should explain the divergences between the various authors.

Castell, H. C.
MECHANICAL PROPERTIES OF NICKEL AND NICKEL ALLOY DEPOSITS (Les Propriétés Mécaniques des Dépôts Électrolytiques de Nickel et d'Alliages de Nickel). [1963] [25]p. (foreign text included) 11 refs.
Order from SLA $2.60 63-14046

Trans. of Metaux (Corrosion-Industries) (France) 1957 [v. 32] no. 379, p. 122-131.

DESCRIPTORS: *Nickel, *Nickel alloys, Cobalt alloys, Zinc alloys, Phosphorus alloys, Mechanical properties, *Plating, Corrosion inhibition.

Görlich, H.-K. and Stein, G.
THE EFFECT OF SMALL BORON ADDITIONS UNALLOYED STEELS WITH 0.1 TO 0.4% C.
June 63.
Order from BISI £4 BISI-3240

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1959, v. 30 [no. 12] p. 737-742.

DESCRIPTORS: *Carbon alloys, *Steel, Additives, *Boron alloys, Iron alloys, Hardenability, Grain structures (Metallurgy), Eutectics.

Vogel, R.
THE SEGREGATION EFFECT OF CHROMIUM IN THE IRON NICKEL-SULPHUR SYSTEM.
June 63.
Order from BISI £3 5s BISI-3223

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1962, v. 33 [no. 10] p. 723-727.

DESCRIPTORS: *Sulfur, *Nickel alloys, *Iron alloys, *Chromium, Separation, Surfaces, Microstructure.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

Konstantinov, O. V. and Perel', V. I.
A PROPOS DE LA DISTRIBUTION DE L'ÉNERGIE D'ATOMES NEUTRES RAPIDES ÉMIS PAR UN PLASMA [Energy Distribution of Fast Neutral Atoms Emitted by a Plasma] tr. by Anonyme. 4 Mar 62 [8]p. 3 refs. CEA Trans. no. R 1532.
Order from OTS or SLA $1.10 63-15490

Trans. in French of #Zh[urnal] Tekh[nicheskoi] Fiz[iki] (USSR) 1960, v. 30, no. 12, p. 1485-1488.

DESCRIPTORS: *Plasma physics, Emissivity, *Atoms, Energy, Distribution, Differential equations, *Albedo.

Magnac-Vallette, Denyse and Liess, Marcel.
TRITIUM RESERVOIR HAVING A SMALL FLOW, USABLE ON A VAN DE GRAFF GENERATOR
Letter to the editor. [1962] 3p.
Order from SLA $1.10 62-16662

Trans. from [Journal de Physique et le Radium] (France) 1956, v. 17 [no. 5] p. 449.

DESCRIPTORS: *Van de Graff generators, Generators, *Tritium, Storage.

Oganesyan, Yu. Ts., Lobanov, Yu. V. and others.
GAMMA SPECTRA IN HEAVY ION REACTIONS (γ-Spektry v Reaktsiyakh s Tyazhelymi Ionami) tr. by S. Shewchuck. Apr 62 [30]p. (foreign text included) 12 refs.
Order from OTS or SLA $2.60 UCRL Trans-819(L)

Trans. of Joint Institute for Nuclear Research Dubna (USSR) P-802, n.d., 16p.

DESCRIPTORS: *Charged particles, *Ions, Oxygen, Copper, Tantalum, Tungsten, Uranium, *Ion bombardment, Nuclear reactions, *Radioactive decay, *Gamma ray spectra.

Using the one-crystal spectrometer γ-quantum spectra have been investigated by exposing Cu, Ta, W. and U-targets to the O_{16} ions in the energy interval 80-140 MeV. The cascade emission of 20-30 soft γ-quanta per each act of the compound nucleus formation is observed.

The effect of the angular momentum on the mechanism of the excited nucleus decay is discussed. (Author)

Schmeling, P.
PRELIMINARY RESULTS ON THE RELEASE OF XENON-133 FROM URANIUM MONOCARBIDE. [Special Technical rept. 6 on Research into the Diffusion of Inert Gases in Solid Bodies] 1 June 61-2 Mar 62, on Contract 064-60-8-RDD. [1962] 21p. 8 refs. HMI EU-B-16.
Order from OTS or SLA $1.60 EURAEC-362

Trans. of a rept. from Hahn-Meitner-Institut für Kernforschung, Berlin (West Germany) n. d.

DESCRIPTORS: *Xenon, *Uranium compounds, *Carbides, *Tantalum, Chemical reactions, *Rare gases, Gas diffusion, Solids, Radiochemistry, Radioactive isotopes.

The release of Xenon-133 from bulk uranium monocarbide was studied at 950-1900° C in vacuum, whereby the chemical reaction between the specimen and the surrounding materials was avoided as much as possible It was noted that tantalum reacts with UC. When heated for the first time, a burst of activity was registered. Successive temperature increases resulted in some cases in a new burst, in other cases no new burst was noted. The experiments made an estimation of the activation energy possible, a value of about 70 kcal/mole was calculated for the temperature interval 950-1600° C. The release pattern is complicated, and though a number of specimens were investigated, new experiments must be performed in order to understand the release process. (Author) (See also EURAEC-361)

Schmeling, P.
PRELIMINARY RESULTS ON THE RELEASE OF XENON-133 FROM URANIUM MONOCARBIDE POWDER. [Special Technical rept. on Research into the Diffusion of Inert Gases in Solid Bodies] 11 Nov 61-12 Mar 62, on Contract 064-61-8-RDD. [1962] 14p. HMI EU-B-15.
Order from OTS or SLA $1.60 EURAEC-361

Trans. of a rept. from Hahn-Meitner-Institut für Kernforschung, Berlin (West Germany) n. d.

DESCRIPTORS: *Xenon, Rare gases, Gas diffusion, Solids, *Uranium compounds, *Carbides, Powders, Radiochemistry, Heat treatment, Grain structures (Metallurgy), Radioactive isotopes.

The release of xenon-133 from coarse powders of uranium monocarbide was measured. and in most cases acceptable release curves resulted. When heated for the first time, a pronounced burst of activity was noted, but successive temperature increases did not result in new bursts. However, if the temperature is raised above 1400° C, a distinct burst is noted, which may be caused by a beginning sintering. The evaluation of these experiments is preliminary only; as a BET surface determination has not been made, diffusion coefficients have not been calculated. The activation energy of the diffusion process may be estimated and is about 67 kcal/mole. (Author)

Schmeling, P.
RELEASE OF FISSION RARE-GAS DURING PAD HEATING AS A RESULT OF CHEMICAL INTERACTIONS AND ITS FALSE INTERPRETATION AS BEING DIFFUSION. [Special Technical rept. 4 on Research into the Diffusion of the Inert Gases in Solid Bodies] 11 Nov 61- 12 Mar 62, on Contract 064-61-8-RDD. [1962] 48p. 54 refs. HMI EU-B-14.
Order from OTS or SLA $4.60 EURAEC-360

Trans. of a rept. from Hahn-Meitner-Institut für Kernforschung, Berlin (West Germany) n. d.

DESCRIPTORS: *Rare gases, Radiochemistry, *Gas diffusion, Solids, Uranium, Uranium compounds, Carbides, Dioxides, *Fission products, Corrosion, Xenon, Powders, Single crystals, Heating.

The experimental difficulties encountered when measuring the diffusion of fission gases are pointed out. Release patterns in cases of obvious specimen corrosion are shown and compared with the expected form of a release curve. It is demonstrated that a false interpretation of a release curve may give too high a value of diffusion coefficient, and that there is no obvious way of discovering if a certain release pattern is caused by pure diffusion or not. Hitherto unpublished results on xenon release from uranium metal are cited, as well as preliminary data on xenon release from PAD heated uranium monocarbide. A critical review is also done on rare-gas diffusion from UO_2 powders and single crystals. (Author)

Vladimirskii, V. V.
THE INFLUENCE OF THE EARTH'S MAGNETIC FIELD ON LARGE AUGER ELECTRON SHOWERS (O Vliyanii Magnitnogo Polya Zemli na Bol'shie Livni Ozhe) tr. by D. A. Sinclair. 1963, 16p. 9 refs. NRCC Technical Trans. 1080.
Order from NRCC $1.00 NRCC C-4464

Trans. of Zhur[nal] Eksper[imental'noi] i Teoret[icheskoi] Fiz[iki] (USSR) 1948, v. 18, no. 4, p. 392-401.

DESCRIPTORS: *Terrestrial magnetism, *Electrons, Beta particles, *Particle trajectories, Bremsstrahlung, Numerical analysis, Particle spectra.

Nuclear Engineering and Power

HEAT TRANSFER AND STABILITY STUDIES IN BOILING WATER REACTOR. Quarterly repts. 3-4, 1 July 61-1 Jan 62, on Contract 032-60-11-RDH. [1962] 39p. 9 refs.
Order from OTS or SLA $3.60 EURAEC-276

Trans. of a rept. from Technische Hogeschool, Eindhoven (Netherlands) Jan 62.

DESCRIPTORS: *Heat transfer, *Stability, *Boiling water reactors, Nuclear reactors, Measurement, *Pressure gages, Pressurized water reactors.

Experiments were performed with a model of the first core loading of the Halden reactor. Slip factors and two-phase factors were determined. Also non-boiling lengths, exit void fraction and steam qualities were calculated. Calibrations and cold tests were carried out in preparation for the measurement of the differences between a uniform and a cosine flux distribution. A fast differential pressure gauge for detecting flow instabilities was developed. Measurements concerning the control characteristics of the rectifier-unit were made. The maximum flow rate for constant temperatures occurred at a lower power with a glass shroud than with an aluminum shroud with inlet holes in the hull. Experiments were made at high heat fluxes for clearing the Halden Boiling Water Reactor for operation at 10 megawatts and 30 atm. A qualitative measurement was made of the void fraction using a capacitance gauge at 90% of the channel height. There was some indication of hydraulic instability in the region of high power. A rod cluster element simulating a second core loading fuel channel was used to demonstrate the stability of flow conditions. The absolute and differential pressure gauges and the void gauge were further developed. Studies were made concerning void fraction, bubble dimension, and noise measurement. (See also EURAEC-158)

PLUTONIUM RECYCLING (WITH TWO APPENDICES). Quarterly rept. 4, 1 Jan-31 Mar 62, on Contract 037-60-12 RDF. [1963] 17p. 3 refs.
Order from OTS or SLA $1.60 EURAEC-365

Trans. of a rept. from Commissariat a l'Energie Atomique, Paris (France) n.d.

Includes appendix 1: Electric resistivity of UO_2-PuO_2 compounds between 20° C and 700° C [and] appendix 2: Concerning an electric resistance ahomaly in sintered UO_2, by Baruch Raz and Hans-Eberhard Schmidt.

DESCRIPTORS: *Reactor fuels, *Plutonium, *Uranium, *Oxides, Sintering, Resistance (Electrical), Physical properties, Tests, *Reactor fuel processing, Ceramic materials.

Topics include: PuO_2 dispersion in inert oxides, in particular Al_2O_3 and MgO; study of certain physical properties of UO_2 PuO_2 (physical measurements on UO_2 monocrystals, measurement of electric resistivity of UO_2 PuO_2 sintered samples); irradiation of plutonium-based fuel elements in pile EL 3. (analysis of irradiated elements); and fabrication of plutonium-based fuel elements.

Aleshin, V. S. and Sarkisov, A. A.
AN EXAMPLE OF CALCULATION OF A PRESSURIZED WATER POWER REACTOR. 27 June 63, 36p. JPRS: 19897.
Order from OTS $1.00 63-31140

Trans. of mono. Energeticheskie Yadernye Reaktory (Nuclear Power Reactors) Moscow, 1961, p. 311-333.

DESCRIPTORS: *Pressurized water reactor, *Nuclear reactors, *Reactor lattice parameters, Reactor fuels, Uranium compounds, Dioxides, Zirconium, Reactor operation, Numerical analysis, Power reactors.

Cserep, George and Stenger, Vilmos.
RESULTS IN THE PREPARATION OF CLOSED RADIOACTIVE RADIATION SOURCES IN HUNGARY. 11 July 63, 6p. JPRS: 20129.
Order from OTS $0.50 63-31261

Trans. of Energia es Atomtechnika (Hungary) 1963, v. 16, no. 3, p. 142-143.

DESCRIPTORS: Preparation, Radioactivity, *Radioactive isotopes, Containment, Radioactive decay, Hungary, Nuclear particles, *Nuclear power plants.

Richter, H. and Wincierz, P.
INVESTIGATION OF ALLOYS OF ZIRCONIUM WITH NIOBIUM AND TIN IN VIEW OF THEIR UTILIZATION AS SHEATHING MATERIAL IN WATER-COOLED NUCLEAR REACTORS: EXAMINATION OF TUBES MADE OF THE ALLOY ZrNb3Sn1. Special technical rept. 3 concerning proposal 139, on Contract 047-61-4 RDA. [1963] 36p. 12 refs.
Order from OTS or SLA $3.60 EURAEC-354

Trans. of rept. from Metallgesellschaft A. G., Frankfurt a. M. (West Germany) 18 May 62.

DESCRIPTORS: *Light water reactors, *Niobium alloys, *Tin alloys, *Reactor fuel cladding, Nuclear reactors, Zirconium alloys, Heat resistant metals and alloys, Water, Reactor coolants.

The alloy ZrNb3Sn1 which, in corrosion tests and mechanical tests, had proved to be a promising material, can be machined into thin-walled, seamless tubes such as are required for use in reactors. For the fabrication of tubes by extrusion, cold-rolling (Mannesmann process) and drawing, it is best to use a starting material thick-walled extruded tubes. The extruded tubes have a double fibre texture with $(10\bar{1}0)$ and $(11\bar{2}0)$ parallel to the axis of the tube, whereby the $(10\bar{1}0)$ component is strongly prevailing. The scattering in the orientation of the hexagonal basal plane parallel to the wall of the tube increases with decreasing degree of extrusion. In the two first cold-rolling stages, the extrusion texture remains practically unchanged. Drawn tubes exhibit an annular fibrous texture which was beginning to take shape already in the third reciprocating rolling run on account of an increase in the scattering. Annealing stages at 575 - 750°C do not alter the texture. Extruded and rolled tubes exhibit the same creep behavior as extruded and swaged rods of the same alloy, so that the data obtained with rod material could be applied straightway to seamless tubes. In the cross-fold and expanding tests, the ZrNb3Sn1 alloy answers the standards required from zircaloy-2. (Author)

Schmets, J. and others.
RETREATMENT OF SPENT FUELS. Quarterly rept. 2, July-Sep 60. [1962] 136p. CEN R-1910.
Order from OTS or SLA $10.50 EURAEC-24

Trans. of a rept. from Centre d'Étude de l'Énergie Nucléaire, Brussels (Belgium) 1960.

DESCRIPTORS: *Reactor fuels, Chlorination, Kinetic theory, Particles, Fission products, Disposal, Powders, *Uranium compounds, *Fluorides, *Plutonium, Chlorides, Carbides, Oxides, Kinetic theory, Oxidation reduction reactions, Fluidized solids.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 226 (PHYSICS AND MATHEMATICS SERIES). 28 June 63, 13p. JPRS: 19927.
Order from OTS $0.50 63-31152

Consists of abstracts of articles from selected scientific and technical journals of Czechoslovakia.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, *Czechoslovakia, *Nuclear energy, Nuclear reactors, Pressure vessels, Uranium, Carbon dioxide, Iron, Antimony, Aluminum, Copper, Neutron activation, Uranium compounds, Dioxides, Sintering, Tracer studies, Radioactive isotopes, Production, Organic compounds, Plutonium, Spectrographic analysis, Neutron detectors, Theses, Ferromagnetic materials, Particle trajectories, Atoms, Quantum statistics, Infrared radiation, Conferences, Scientific organizations.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 227 (PHYSICS AND MATHEMATICS SERIES). 28 June 63, 8p. JPRS: 19931.
Order from OTS $0.50 63-31156

Abstract trans. of Kernenergie (East Germany) 1963, v. 6, no. 4, p. 137-184.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, *East Germany, *Nuclear energy, Power reactors, Control rods, Neutron transport theory, Holmium, Radioactive decay, Graphite, Crystal structure, Radiation effects, Labeled substances, Reactor fuel processing, Chlorination, Fission neutrons, Uranium compounds, Oxides, Calorimetry, Adsorption, Nuclear spectroscopy, Reactor materials, Nuclear power plants, Pipes.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 237 (PHYSICS AND MATHEMATICS SERIES). 8 July 63, 5p. JPRS: 20064.
Order from OTS $0.50 63-31229

Abstract trans. of Kernenergie (East Germany) 1963, v. 6, no. 5, p. 187-191, 193-238.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, *East Germany, *Nuclear energy, Power reactors, Differential equations, Integral equations, Gamma rays, Ion sources, Hygrometers, Radiation measurement systems, Radiochemistry, Radiolysis, Soils, Plants, Radioactivity, Strontium.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 242 (PHYSICS AND MATHEMATICS SERIES). 19 July 63, 9p. JPRS: 20240.
Order from OTS $0.50 63-31325

Consists of abstracts of articles from selected scientific and technical journals of East Germany.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, East Germany, *Nuclear energy, Physicists, Kinetic theory, Plasma physics, Electric discharges, Spectrographic data, Electromagnetic wave reflections, Reactor fuel processing, Halogenation, Reactor operation, Fast neutrons, Research reactors, Oscillators, Shielding, Uranium, Fission, Moisture, Radiation measurement systems, Food, Radioactivity, Strontium, Complex compounds.

USSR SCIENTIFIC ABSTRACTS: PHYSICS AND MATHEMATICS NO. 1. 13 June 63, 126p. JPRS: 19677.
Order from OTS $2.75 63-31038

Consists of abstracts of articles from USSR scientific and technical journals.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, Nuclear physics, Nuclear reactors, Reactor lattice parameters, Plasma physics, Magnetohydrodynamics, Shock waves, Supersonics, Aerodynamics, Hydrodynamics, *Mechanics, Solid state physics, Optics, *Particle accelerators, Instrumentation, Differential equations, Integral equations, *Cybernetics, *Computers.

USSR SCIENTIFIC ABSTRACTS: PHYSICS AND MATHEMATICS NO. 2. 5 July 63, 91p. JPRS: 20038.
Order from OTS $2.25 63-31212

Consists of abstracts of articles from USSR scientific and technical journals.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, Nuclear physics, Plasma physics, Magnetohydrodynamics, Shock waves, Supersonics, Aerodynamics, Hydrodynamics, *Mechanics, Solid state physics, Optics, Particle accelerators, Instrumentation, Differential equations, Integral equations, *Cybernetics, *Computers.

Gouffé, André.
APERATURE CORRECTIONS OF ARTIFICIAL BLACK BODIES WITH CONSIDERATION OF MULTIPLE INTERNAL DIFFUSIONS. PT. I. CORRECTION OF THE EMISSIVE POWER. PT. II. CORRECTION OF THE TEMPERATURE GRADIENT [Corrections d'Ouverture des Corps-Noirs Artificiels Compte Tenu des Diffusions Multiples Internes]. [1963] 16p. 1 ref.
Order from OTS or SLA $1.60 63-14657

Trans. of Rev[ue] d'Optique Théorique et Instrum[entale] (France) 1945, v. 24, no. 1/3, p. 1-10. Other translations are available from SLA as AL-289 [16]p. and OTS or SLA $1.60 as 59-19005 [1959] [12]p.

DESCRIPTORS: *Blackbody radiation, Diffusion, Emissivity, Corrections, *Radiation pyrometers, Calibration, Standards.

The fact that an artificial black body radiates energy through its aperture involves two types of corrections: a correction of the emissive power and a correction of the temperature gradient. Although the emissive power value always is less than unity, it is calculated with consideration of the multiple diffusions which the lightflux emitted by the walls suffers within the radiating chamber. The form of the black body enters then as the ratio s/S of the area of the aperture to the total area of the internal surface of the radiator. The energy radiated to the exterior through the aperture must be transmitted by conductivity through the thickness of the wall of the black body. This is the reason for the existence of a temperature gradient between the external and the internal faces of the chamber. The value of this gradient is calculated for the region of the chamber which radiates directly toward the exterior, and for the region in which no direct loss by radiation is produced. (Author)

Rytov, S. M.
RELATION OF THE DISTRIBUTION OF A QUASI-MONOCHROMATIC STATIONARY PROCESS TO THE DISTRIBUTION OF ITS ENVELOPE. [1961] 3p. 2 refs. MDF R-107.
Order from OTS $0.50 62-11621

Trans. of #Zh[urnal] Eksp[erimental'noi i] Teor[eticheskoi Fizikii] (USSR) 1955, v. 29, no. 5, p. 702-703.

DESCRIPTORS: *Statistical distributions, Statistical functions, Transformations (Mathematics), *Optics.

Zarzycki, J. and Naudin, F.
MEASUREMENT OF THE MAGNETIC ROTATORY POWER (FARADAY EFFECT) OF MOLTEN SALTS AT ELEVATED TEMPERATURES. [1963] 4p.
Order from ATS $4.50 ATS-10Q70F

Trans. of [Academie des Sciences, Paris]. Compt[es] Rend[us] (France) 1963, v. 256, p. 634-637 (pub. by Gauthier-Villars et Cie Paris).

DESCRIPTORS: *Magneto-optic effect, Salts, High temperature research, Measurement.

Electricity and Magnetism

Bulkin, P. S., Solntsev, G. S., and Ponomarev, V. N.
INVESTIGATION OF A SELF-SUSTAINING SUPER-HIGH FREQUENCY PULSE DISCHARGE IN AIR AND ITS INITIATION PROCESS. [1962] 7p. 9 refs.
Order from OTS or SLA $1.10 62-18257

Trans. of #[Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya] 1959, v. 23, no. 8, p. 941-947.

DESCRIPTORS: Superhigh frequency, *Electric discharges, Air, Pulse generators, Pressure, Standing-wave ratios, Luminescence, *Radiofrequency pulses.

A procedure was developed for comprehensive investigation of the formation of super-high frequency pulse discharges by recording the variation of the standing-wave ratio, the local luminous output and the dimensions of the discharge. The three experimental procedures yield consistent results. The existence of three stages in the development of a self-sustaining super-high frequency discharge in air at pressures from 1 to 40 mm Hg was established. Through experiments with pulse packets, the build-up to the steady self-sustaining discharge state may extend over several pulses, the number depending on the pressure, overvoltage and pulse repetition rate. (Author)

Heinrich, K.
SIMPLE DEVICE FOR DETERMINING PHASE DISPLACEMENT IN OUTPUT MEASUREMENTS: 10 Apr 47, 3p. (figs. omitted).
Order from SLA $1.10 62-18365

Trans. of ETZ [Elektrotechnische Zeitschrift. Ausgabe A. Zentralblatt fllr Elektrotechnik] (Germany) 1941, v. 62 [no. 26] p. 589-591.

DESCRIPTORS: Measuring devices (Electrical and electronic), *Phase meters, Phase distortion.

Levin, M. S.
CALCULATION OF DISTRIBUTING NETWORKS WITH THE AID OF THE MINSK DIGITAL COMPUTER. 21 June 63, 12p. 3 refs. JPRS: 19794.
Order from OTS $0.50 63-31092

Trans. of Elektrichestvo (USSR) 1963, no. 4, p. 1-5.

DESCRIPTORS: *Electrical networks, Mathematical analysis, Digital computers, *Programming (Computers).

Popkov, V. I.
THE THEORY OF BIPOLAR CORONA ON CONDUCTORS (Teoriya Bipolyarnoi Korony na Provodakh) tr. by G. Belkov. 1963, 24p. 10 refs. NRCC Technical Trans. 1074.
Order from NRCC $1.50 NRCC C-4457

Trans. of Akad[emiya] Nauk SSSR. Otdel[enie] Tekh[nicheskikh] Nauk. Izvest[iya] 1948, no. 4, p. 433-448.

DESCRIPTORS: Theory, Electric discharges, *Electrical corona, *Electrical conductance, Electric fields, Gas ionization.

Seitzer, Dieter.
CHANGE IN SHAPE OF STEP-LIKE IMPULSES DUE TO A CORNER IN A LEAD WIRE. [1962] 14p. 4 refs.
Order from SLA $1.60 62-16683

Trans. of Archiv [der] Elektr[ichen] Ubertrag [ung] (West Germany) 1961, v. 15, no. 7, p. 303-307.

DESCRIPTORS: *Waveform generators, *Wave transmission, Voltage, *Electrical impedance, Dielectrics, *Transmission lines, Model tests.

The paper investigates the effect on the waveform of a passing step voltage of an inhomogeneous place in a homogeneous line where the characteristic impedance deviates for a certain length from that of the following line section. The reflected pulse components are accounted for a path-time diagram and conclusions are made as to the form of the sending-end voltage. It is found that the step-wise rise is shaped into a rise of finite time which can be well approximated by an exponential function. For a model example where the characteristic impedance changes in the way of a squared-cosine function for a length of 1.2 m by the factor 15, good agreement between measurement and analysis can be shown. For the practical examples of a curved strip line, a dielectric support, and a 90-degree elbow the time constant is determined; it is found that it is about one order of magnitude below the rise times attainable today. (Author)

Smolenskii, V. M., Yudin, V. M., and Sher, E. S.
A NEW GROUP OF ANTIFERROMAGNETS WITH K_2NiF_4 STRUCTURE. [1963] 4p. 5 refs.
Order from OTS or SLA $1.10 63-14453

Trans. of #Fiz[ika] Tverdogo Tela (USSR) 1962, v. 4, no. 11, p. 3350-3351.

DESCRIPTORS: *Antiferromagnetism, *Ferromagnetic materials, *Potassium compounds, *Nickel compounds, Fluorides, Crystal structure, *Crystal lattices, Magnetic moments, Magnetic susceptibility.

Electronics

Druyvesteyn, M. J.
SEARCH FOR A THEORY OF THE POSITIVE COLUMN WITH MOVING STRIATIONS. [1963] 9p. 7 refs.
Order from SLA $1.10 63-14460

Trans. of Physica (Netherlands) 1934, v. 1, p. 273-280.

DESCRIPTORS: *Gas discharges, *Glow discharges, Theory, Equations, Electrons, Diffusion, *Discharge tubes, Low pressure research, *Helium group gases, Neon, *Plasma physics.

The equations of the homogeneous positive column in noble gases are enlarged, so that they can be used for the positive column with moving striations. An approximate solution of these equations is given, which resembles the moving striations. The order of magnitude of the distance of the striations and of the velocity in Neon is correctly given by the calculation. (Author)

Huttmann, E.
PULSE COMPRESSION WITHOUT DISPERSIVE NETWORKS. [1962] 13p. 15 refs.
Order from SLA $1.60 62-18643

Trans. of Nachrichtentechnik (German Democratic Republic) 1961, v. 11, no. 9, p. 422-425.

*DESCRIPTORS: *Pulse compression.

Khristov, Vasil and Buchvarov, Nikolai.
INFORMATION ON THE ATOMICS CENTER OF THE BULGARIAN ACADEMY OF SCIENCES. 28 June 63, 3p. JPRS: 19951.
Order from OTS $0.50 63-31166

Trans. from Trud, Moscow (USSR) 1963, 11 May, p. 3.

DESCRIPTORS: *Scientific organizations, Bulgaria, *Thermoelectric converters, Cathodes, Scientific research.

Kislyakov, A. G.
DETERMINATION OF THE VARIANCE OF A SEGMENT OF A STATIONARY RANDOM FUNCTION FROM ITS SPECTRUM. [Jan 60] 3p. 3 refs.
MDF K-202; AFCRL-TN-60-133.
Order from OTS $0.50 62-11403

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Radiofizika (USSR) 1959, v. 2, no. 3, p. 508-509.

DESCRIPTORS: *Radiofrequency spectroscopy, *Statistical functions, *Analysis of variance, Time lag theory, Frequency.

Calculations show that the "one-sided" drifts yield an almost negligible contribution to the variance in the time T for a sufficiently slow growth of the actual spectrum as the frequency diminishes.

Pupp, W.
FREQUENCY AND LAYER-DEPTH OF MOVING STRIATIONS IN THE POSITIVE COLUMN OF RARE GASES. [1963] 12p. 6 refs.
Order from SLA $1.60 63-14457

Trans. of Zeitsch[rift] für Tech[nische] Physik (Germany) 1934, v. 15, p. 257-262.

DESCRIPTORS: *Gas discharges, *Glow discharges, Frequency, Thickness, Graphic analysis, *Discharge tubes, Low pressure research, *Helium group gases, Helium, Neon, Krypton, Argon, *Plasma physics.

Without discussing the mechanism of moving striations, some trends are established for the course of frequency and striation layer-depths, on the basis of experimental data. For He, Ne, Kr, Ar this course is represented by curves. (Author)

Scholz, Ole.
HIGH FREQUENCY PLASMA BURNER [Der Hochfrequenz-Plasma-brenner]. [1962] 4p. [1 fig. 5 refs. omitted].
Order from SLA $1.10 62-10090

Trans. of die Umschau in Wissenschaft und Technik (West Germany) 1959 [v. 59] no. 23, p. 716-717.

DESCRIPTORS: High frequency, *Plasma physics, Torches, Flames, Electric discharges.

Molecular Physics and Spectroscopy

Beckey, H. D.
FIELD IONIZATION MASS SPECTRA OF ORGANIC MOLECULES. PT. I: C_1 TO C_9n-PARAFFINS. [1963] 15p.
Order from ATS $22.75 ATS-25Q68G

Trans. of Z[eitschrift für] Naturforsch[ung] (West Germany) 1962, v. 17a, p. 1103-1111.

DESCRIPTORS: Ionization, *Mass spectrum, *Organic compounds, Molecules, *Methanes.

Borovik-Romanova, T. F., Balyaev, Yu. I. and others.
DETERMINATION OF RARE AND TRACE ELEMENTS IN SOILS, PLANTS AND WATERS. 25 Apr 63 [51]p. 108 refs. FTD-TT-63-280.
Order from OTS $1.50 63-11661

Unedited rough draft trans. of mono. Spektral'noe Opredelenie Redkikh i Rasseyannykh Elementov, Moscow, 1962, p. 204-238.

DESCRIPTORS: *Soils, *Plants (Botany), *Water, Spectroscopy, *Alkali metals, Alkaline earth metals, *Rare earth elements, Bismuth, Cadmium, Antimony, Zinc, Molybdenum, Tungsten, Tin, Indium, Thallium, Gallium, Germanium, Zirconium, Hafnium, Niobium, Tantalum

A survey of methods useful for the spectroscopic determination of alkali metals, alkaline earth metals, rare earth elements, and certain other rare and trace elements in soils, plants, and natural waters.

Freymann, Marie and Freymann, M. René.
INTERPRETATION OF VARIOUS CHEMICAL PROPERTIES BY THE THEORY OF THE HYDROGEN BOND: INFRARED AND ABSORPTION SPECTRA. [1963] 5p. ([tables] refs. omitted).
Order from SLA $1.10 63-14232

Trans. of Soc[iété] Chim[ique de France]. Bull[etin] 1937, ser. 5, v. 4, p. 944-950.

DESCRIPTORS: *Chemical bonds, Hydrogen, Theory, Chemical properties, *Chelate compounds, Salicyclic acids, Anhydrides, *Molecular isomerism, Amides, *Oxonium compounds, *Molecular association, *Spectra (Infrared), *Absorption spectrum.

The authors summarize the research done on the hydrogen bond with the aid of infrared absorption spectra. They distinguish the intra and intermolecular bonds and show that the theory of the hydrogen bond permits tracing to the same cause a certain number of apparently different chemical facts. Chelation of salicylic aldehyde, isomeric keto-eno, tautomerism of amides, formation of oxonium compounds and ammonium compounds, phenomena of molecular associations. (Author)

Stumpf, K. E. and Gonsior, Th.
POSSIBILITIES OF APPLYING ATOMIC ABSORPTION FLAME SPECTROSCOPY IN THE IRON AND STEEL WORKS LABORATORY. June 63.
Order from BISI £3 BISI-3247

Trans. of mono. (special publication) by Phoenix-Rheinrohr A. G., Duisburg-Ruhrort, n.d.

DESCRIPTORS: Metallurgical laboratories, *Steel industry, *Iron industry, *Flames, Spectroscopy, *Atomic spectroscopy, *Absorption spectrum.

Solid State Physics

Asakura, T.
DIFFRACTION PATTERNS OF APERTURES WITH NON-UNIFORM PHASE AND AMPLITUDE DISTRIBUTIONS. I. THE WIENER APODIZATION PROBLEM. [1963] 15p.
Order from ATS $15.40 ATS-88Q68J

Trans. of Oyo Butsuri (Japan) 1962, v. 31, no. 9, p. 730-738.

DESCRIPTORS: *Diffraction analysis.

Beck, A. and Mooser, E.
APPARATUS FOR PULLING SINGLE CRYSTALS OF COMPOUNDS WITH VOLATILE COMPONENTS. [1962] 5p. 5 refs.
Order from SLA $1.10 62-16597

Trans. of Helv[etica] Phys[ica] Acta (Switzerland) 1961, v. 34, 15 Aug, p. 370-373.

DESCRIPTORS: *Single crystals, Crystals, *Crystal holders, Metallic crystals.

The apparatus uses magnetic coupling combined with a new drive system for the crystal holder. Due to the special shape of the pole pieces and the two hollow cylinders of Hiperco (Curie point 970°C) sealed in the seed holder, the latter is always attracted to the same pole piece. If the magnet rotates around the axis of the ampoule, the seed holder on its two roller tracks rolls down the inside of the ampoule in such a manner that all points of its axis describe circles and all its remaining points hypocycloids. If the magnet is lifted, the points of contact of the roller tracks with the ampoule walls pass along these two spiral lines. Since the growth rate of the crystals and, consequently, the axial velocity of the magnet are low (~1 cm/h), this movement produces primarily rolling friction between seed holder and ampoule wall and the uniform movement of the seed necessary for crystal pulling is obtained. At the same time the rotating seed brings about a thorough stirring of the melt.

Dobrovol's'kyi, V. M.
EFFECT OF A MAGNETIC FIELD ON THE DIFFUSION OF INJECTED CURRENT CARRIERS. [1963] 22p. 22 refs.
Free copies available from Boeing Scientific Research Labs. Library as Boeing Trans. R57. When supply is exhausted, order from OTS or SLA $2.60, 63-16550

Trans. of Ukrayinskyi Fizychnyi Zhurnal (USSR) 1960, v. 5, no. 3, p. 333-344.

DESCRIPTORS: *Magnetic fields, *Diffusion, *Electric currents, Semiconductors, Germanium, Electrons, Hall effect, Numerical analysis.

The effect of a magnetic field on the diffusion of injected current carriers is examined in a linear approximation in terms of the concentration. Analytic expressions are obtained for quantities characterizing the diffusion of current carriers in the case in question for weak and strong fields and for an exponential dependence of the mean free path on the velocity. In the case of the mean free path no dependent on the velocity, graphs are given of these quantities as functions of the magnetic field, including also the region of medium fields. For specific cases equations are solved and the possibilities are indicated for measuring quantities characterizing the diffusion of carriers in the presence of a magnetic field and of determining from them the ratio of the Hall and drift mobilities of the minority carriers, the ratio of the concentration and mobilities of light and heavy holes, the diffusion coefficient of the carriers, and the concentration of electrons and holes in a semiconductor of combined conductivity. (Author)

Hilpert, S., Wille, A., and Lindner, A.
RELATIONSHIPS BETWEEN FERROMAGNETISM AND STRUCTURE OF FERRITES (Zusammenhänge zwischen Ferromagentismus und Aufbau der Ferrite). [52]p. (foreign text included) 31 refs.
Order from SLA $5.60 63-16745

Trans. of Z[eitschrift für] Phys[ikalische] Chem[ie, Leipzig] (Germany) 1932, v. 18B, p. 291-315.

DESCRIPTORS: *Ferromagnetism, Ferromagnetic materials, *Ferrites, Alkaline earth compounds, Alkali metal compounds, Zinc compounds, Aluminum compounds, Tin compounds, Lead compounds, Copper compounds, Antimony compounds, *Manganese compounds, Iron compounds, *Crystal structure.

Kasai, J. and Nakahara, M.
LARGE CRYSTALS OF $CaSO_4.2H_2O$ FROM $CaCl_2$ AND Na_2SO_4. [1963] 9p.
Order from ATS $11.25 ATS-73Q69J

Trans. of Sekko to Sekkai (Japan) 1963, no. 62, p. 21-26.

DESCRIPTORS: *Calcium compounds, *Sulfates, *Hydrates, *Gypsum, *Crystals, Synthesis (Chemistry), Chlorides, Sodium compounds.

Kovba, L. M. and Trunov, V. K.
INVESTIGATION OF DIOXIDES OF TUNGSTEN, TANTALUM AND NIOBIUM. [1963] 6p. 3 refs.
Order from OTS or SLA $1.10 63-14456

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 147, no. 3, p. 622-624.

DESCRIPTORS: *Tungsten compounds, *Tantalum compounds, *Niobium compounds, *Oxides, Dioxides, Cerium compounds, *Crystal structure, Phase studies, Statistical data, Uranium compounds, Thorium compounds.

The reactions of thorium dioxide, cerium dioxide with tantalum pentoxide and niobium pentoxide were investigated, as well as tantalum pentoxide with tungsten trioxide. New data were obtained on oxygen compounds of uranium and tungsten. Mixtures of oxides were sintered in air, in nitrogen or in evacuated quartz ampoules. Phase analysis of products of sintering was conducted in a Ginie chamber.

Moriyama, T. and Utsunomiya, T.
CONCENTRATION CHANGES IN AQUEOUS SOLUTIONS OF GYPSUM CAUSED BY THE FORMATION AND GROWTH OF CRYSTAL NUCLEI. [1963] 8p.
Order from ATS $12.50 ATS-64Q69J

Trans. of Kogyo Kagaku Zasshi (Japan) 1957, v. 60, no. 10, p. 1268-1271.

DESCRIPTORS: *Nuclei, Crystal growth, Crystal structure, *Gypsum, Solutions.

Oreshkin, P. T. and Bykov, S. B.
RELAXATION PROCESSES IN DIELECTRICS AND SEMICONDUCTORS. 20 Feb 63 [18]p. 13 refs.
FTD-TT-63-3; AD-299 655.
Order from OTS or SLA $1.60 63-19187

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavadenii. Fizika (USSR) 1962, no. 3, p. 65-73.

DESCRIPTORS: *Dielectrics, *Semiconductors, Relaxation time, Electrical double layer, Electric currents, Electrical conductance, Polarization, *Aluminum compounds, *Oxides.

Residual current in the region of intrinsic conduction of aluminum oxide is calculated. The method of calculation may be extended to other dielectrics. A measuring method was developed which makes it possible for us to investigate rather simply the drop of a direct current in dielectrics at high temperature. Experimental data and a comparison with the theory indicate that the current drop in aluminum oxide is associated with thermal ionic polarization and the creation of depletion layers. The initial natural conductivity of aluminum oxide is apparently formed mainly by aluminum ions, the residual current in the presence of small voltages has an ionic component, and at higher voltages it is mainly formed by electrons. (Author)

Pepperhoff, W.
MICROSCOPIC IMAGE OF FERROMAGNETIC FIELD STRUCTURES BY MEANS OF MERIDIONAL KERR ROTATION (Mikroskopische Abbildung Ferromagnetischer Bereichstrukturen durch Meridionale Kerr-Drehung). [1963, 5]p. (foreign text included) 3 refs.
Order from SLA $1.10 63-18001

Trans. of [die] Naturwissenschaften (West Germany) 1963 [v. 50, no. 3] p. 90.

DESCRIPTORS: *Crystals, Anisotropy, *Ferromagnetism, *Domains (Crystallography), *Magneto-optic effect, *Kerr effect, *Microscopy, Illumination.

Ponyatovskii, E. G. and Peresada, G. I.
PHASE TRANSFORMATION OF INDIUM ANTIMONIDE AT HIGH QUASIHYDROSTATIC PRESSURES. [1963] 6p. 8 refs.
Order from OTS or SLA $1.10 63-14454

Trans. of Akad[emiya] Nauk [SSSR]. Doklady, 1962, v. 144, no. 1, p. 129-131.

DESCRIPTORS: *Indium compounds, *Antimonides, *Phase studies, *Melting, Hydrostatic pressure, Hysteresis, Crystals, Temperature.

A phase diagram for InSb in the pressure range of 1-28,000 kg/cm^2 was constructed. Demonstrably the melting temperature of InSb decreases with pressure to a triple point whose coordinates are 348° and 18,300 kg/cm^2. Above this, InSb crystallizes in a different form (β - InSb). The melting temperature of the new form β - InSb increases with increasing pressure. Several kinetic characteristics of the polymorphic transformation of InSb were investigated. This transformation occured with considerable hysteresis and was accompanied by a resistance change of more than three orders of magnitude. The transformation of InSb is crystallographically irreversible; when it occurs, the monocrystalline specimen disintegrates into small fragments. The temperature and pressure dependence of the transformation speed of InSb were also investigated during these experiments. (Author)

Rausch, Konrad.
STUDIES ON ANTIMONY SINGLE CRYSTALS WITHIN TRANSVERSAL MAGNETIC FIELDS (ELECTRICAL- AND THERMAL RESISTANCE: THERMOELECTRIC POWER) [Untersuchungen an Antimon-Einkristallen im Transversalen Magnetfeld (Elektrischer und Thermischer Widerstand; Thermokraft)]. Thesis pub. Marburg, 1944. [1963] 24p. 30 refs.
Order from SLA $2.60 63-14465

Trans. of Annalen der Physik (East Germany) 1947 [ser. 6, v. 1] p. 190-206.

DESCRIPTORS: *Single crystals, *Thermocouples, *Antimony, Nickel alloys, Copper alloys, *Magnetic fields, Crystal lattices, *Thermal conductivity, Resistance (Electrical), *Thermoelectric generators.

The relative change of electrical and thermal resistance in transversal magnetic fields up to 12 kOe is measured as a function of field direction and field strength at -183° and -195°C. The Kohler relationship is tested and lattice and electronic thermal conductivity are calculated. Differential thermoelectric power of Sb/constantan and $Sb_{\perp}$ / $Sb_{\parallel}$ between -194° and +25°C was measured in the absence and presence of fields, and its field dependence at low temperatures was studied. (Author)

Royen, P. and Forwerg, W.
PREPARATION AND PROPERTIES OF THE METAGERMANATES $MnGeO_3$, $FeGeO_3$ AND $CoGeO_3$. [1963] 3p. 3 refs.
Order from SLA $1.10 63-14444

Trans. of [die] Naturwissenschaften (West Germany) 1963, v. 50, no. 2, p. 41.

DESCRIPTORS: Intermetallic compounds, *Iron compounds, *Manganese compounds, *Cobalt compounds, *Germanium compounds, Oxides, Synthesis (Chemistry), Physical properties, X-ray diffraction analysis, Twinning (Crystallography).

Thermodynamics

Spyra, W.
THE DEVELOPMENT OF A METHOD FOR ABSOLUTE MEASUREMENT OF THERMAL CONDUCTIVITY. June 63.
Order from BISI £4 BISI-3260

Trans. of DEW Technische Berichte [sic] 1962 [v. 2] Nov, p. 166-173.

DESCRIPTORS: *Thermal conductivity, Measurement, Test equipment.

Zysina-Molozhen, L. M.
CALCULATING THERMAL BOUNDARY LAYER IN A FLOW OF COMPRESSIBLE GAS. 3 Apr 63 [10]p. 4 refs. FTD-TT-63-84. AD-402 588.
Order from OTS or SLA $1.10 63-19312

Unedited rough draft trans. of #Inzhenerno-Fizicheskii Zhurnal (USSR) 1962 [v. 5] no. 6, p. 21-26.

DESCRIPTORS: *Gas flow, Compressible flow, *Boundary layer, Surfaces, Turbulent boundary layer, Laminar boundary layer, *Thermodynamics, Numerical analysis, Integral equations, Differential equations.

Discussed is an approximate semiempirical method, which allows with sufficient accuracy to calculate a laminary, transient and turbulent zones of thermal boundary layer when a flow of compressible gas is directed around a surface. (Author)

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY: [SELECTED] TRANSLATIONS NO. 39. 3 July 63, 24p. JPRS: 20006.
Order from OTS $0.75 63-31194

Trans. from Jen Min Jih Pao (Chinese People's Republic) 1963, 9 Apr, p. 5; 23 Apr, p. 5.

DESCRIPTORS: *Scientific research, *China, Agriculture, Cereals, Production, Standards, Antibiotics, Plants (Botany), Diseases, Control.

Contents:
High rice production regulations examined in light of mass conclusions, by Kuo I-hsein
Antibiotics and plant disease control, by Yin Hsin-yun.

CONFERENCES ON PLASTICS, IDEOLOGY AND FOREST CONSERVATION. 5 July 63, 14p. JPRS: 20036.
Order from OTS $0.50 63-31210

Trans. of Ministerstvo Vysshego i Srednogo Spetsial'nogo Obrazovaniya. Byulleten' (USSR) 1962, no. 8, p. 15-17; 1963, no. 1, p. 3-5; no. 3, p. 1-2, 12-13.

DESCRIPTORS: *Conferences, *Plastics, Construction, Production, *Polymers, *Communism, *Forestry, Geology, *Avalanches, Geography, *Education, *Research program administration.

Contents:
On conducting a Scientific Conference on the Use of Plastics in Construction, by V. Elyutin
On conducting a scientific-technical Conference on Continuous Processes and Apparatus for the Production of Polymer Materials and Making Them into Manufactured Goods, by M. Prokof'ev
On conducting an inter-vuz conference on the subject: "Struggle of the CPSU for the Establishment of the Material-Technical Base of Communism", by V. Elyutin
On conducting the Second Inter-vuz Scientific Conference on Problems of Forest Conservation, by M. Prokof'ev
On conducting a scientific Conference on Problems of the Study of Landslides and Measures for Controlling Them, by V. Elyutin
On the approval of the composition of the methodical council for the use of technical resources in the educational process of institutes of higher learning, by V. Elyutin.

FOREIGN DEVELOPMENTS IN MACHINE TRANSLATION AND INFORMATION PROCESSING NO. 130. 28 June 63, 81p. 89 refs. JPRS: 19919.
Order from OTS $2.25 63-31145

Trans. of Mashinny Perevod; Prikladnaya Lingvistika (USSR) 1962, no. 7, p. 3-87, 102-110.

DESCRIPTORS: *Machine translation, *Language, *Speech recognition, Speech representation, Algorithms, Czechoslovakia.

Contents:
Continuous recognition of speech by man, by L. A. Chistovich
An algorithm for syntactical analysis of language texts, general principles and some results, by I. A. Mel'chuk
Applied linguistics in Czechoslovakia, by B. Palek and P. Sgall.

FOREIGN DEVELOPMENT IN MACHINE TRANSLATION AND INFORMATION PROCESSING NO. 132 (MECHANICAL RECOGNITION). 1 July 63, 26p. 1 ref. JPRS: 19966.
Order from OTS $0.75 63-31172

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Tekhnicheskaya Kibernetika, 1963, no. 2, p. 3-16.

DESCRIPTORS: *Machine translation, *Pattern recognition, *Artificial intelligence, Cybernetics.

Contents:
Selection of criteria in mechanical recognition, by A. A. Kharkevich
Some approaches to a practical solution of the problem of recognition, by E. L. Blokh.

SCIENTIFIC RESEARCH INSTITUTIONS IN YUGOSLAVIA. 12 July 63, 7p. JPRS: 20152.
Order from OTS $0.50 63-31272

Trans. of Privredni Pregled (Yugoslavia) 1963 [v. 13, no. 24] p. 8.

DESCRIPTORS: *Scientific organizations, *Directories, Yugoslavia.

Gvishyani, D.
METHODS FOR FURTHER DEVELOPING SCIENTIFIC-TECHNICAL COOPERATION IN THE COUNCIL FOR ECONOMIC MUTUAL ASSISTANCE. 25 Mar 63 [13]p. JPRS: 18337.
Order from OTS $0.50 63-21415

Trans. of Kommunist, Moscow (USSR) 1962 [v. 39] no. 14, p. 73-80.

DESCRIPTORS: *Scientific research, *Economics. Collaboration

Koryukin, V. I. and Lobastov, Yu. P.
THE NATURAL, THE ARTIFICIAL AND CYBERNETICS. 18 June 63, 11p. JPRS: 19710.
Order from OTS $0.50 63-31055

Trans. of Nauchnye Doklady Vysshei Skholy. Filosofskie Nauki (USSR) 1963 [v. 6] no. 1, p. 58-65.

DESCRIPTORS: *Cybernetics, *Bionics, Theory, Artificial intelligence, Philosophy.

Vukulovskaya, G. V. and Kulagina, O. S.
MACHINE TRANSLATION FROM FRENCH TO RUSSIAN: RESULTS OF THE EXPERIMENTS AND ANALYSIS OF ERRORS. 10 June 63, 56p. 16 refs. JPRS: 19631
Order from OTS $1.50 63-31022

Trans. of #Problemy Kibernetiki (USSR) 1963, no. 8, p. 253-291.

DESCRIPTORS: *Language, *Machine translation, Algorithms, Errors.

Some results of machine-translation projects for the translation of French into Russian are presented. The article gives a summary of the general results of the experiments and an analysis of the errors permitted in the translation. (Author)

Zakar'yan, M. M.
AN ALGORITHM FOR MACHINE TRANSLATION FROM RUSSIAN TO LITHUANIAN. Foreign Development in Machine Translation and Information Processing no. 131. 28 June 63, 5p. 3 refs. JPRS: 19939.
Order from OTS $0.50 63-31161

Trans. of Nauchnye Doklady Vysshei Shkoly. Filologicheskie Nauki (USSR) 1963, no. 1, p. 157-158.

DESCRIPTORS: *Language, *Machine translation, *Algorithms.

Zasukha, A. and Ostanovskii, T.
"MINSK" PHOTOGRAPHIC ENLARGERS REJECTED AS DEFECTIVE [AND] A PLEA FOR CONSTRUCTIVE INNOVATION IN CAMERA PRODUCTION. USSR Industrial Development: Soviet Precision Equipment No. 80. 26 June 63 [9]p. JPRS: 19861.
Order from OTS $0.50 63-31113

Trans. of Sovetskoe Foto (USSR) 1963 [v. 23] no. 4, p. 37.

DESCRIPTORS: *Industrial production, *Precision equipment, *Photographic enlargers, *Cameras, *Photographic equipment.

Communication Theory

Grimsen, G.
NEW AUXILIARY PERFORATED TAPE EQUIPMENT FOR PAGE TELEPRINTERS. [1962] 10p. (figs. refs. omitted).
Order from SLA $1.10 62-16970

Trans. of [NTZ; Nachrichtentechnische Zeitschrift] (West Germany) 1952, v. 5, no. 12, p. 545-550.

DESCRIPTORS: *Teletype systems, *Teletype equipment, Printing, Tapes, Data transmission systems.

Auxiliary devices for producing and transmitting perforated tapes recently developed for the Lorenz page printer are described. Their working procedure is explained in detail. (Author)

Henze, E.
INVESTIGATION OF A SPECIAL TRANSFORMATION OF THE TELEPRINTER ALPHABET AS VECTOR TRANSFORMATION. [1962] 7p. (refs. formulae figs. omitted).
Order from SLA $1.10 62-16968

Trans. of Archiv der Elektrischen Übertragung (West Germany) 1955, v. 9 [no. 11] p. 528-532.

DESCRIPTORS: *Teletype systems, *Coding, *Transformations (Mathematics), Matrix algebra, Data transmission systems.

By a reference to a particular example the paper shows, how to interpret and investigate representations of the teleprinter alphabet into itself (privacy coding) as linear vector transformations. A possibility of a technical realization of the chosen example is outlined and proves to be very simple. (Author)

SOCIAL SCIENCES

AWARDS TO SOVIET ENGINEERS, TECHNICIANS, TEACHERS, STUDENTS, INDUSTRIAL AND AGRICULTURAL WORKERS, AND INSTITUTIONS (7 MAY 62 AND 23 AUG 62). 10 June 63, 46p. JPRS: 20106.
Order from OTS $1.25 63-31249

Trans. of Ministerstvo Vysshego i Srednogo Spetsial'nogo Obrazovaniya. Byulleten' (USSR) 1962, no. 12, p. 12-19; 1963, no. 1, p. 5-6; no. 3, p. 13-18; no. 4, p. 13-21.

DESCRIPTORS: *Awards, *Engineering personnel, *Instructors, *Students, Industries, Agriculture, Scientific organizations.

CYBERNETICS, PLANNING AND PRODUCTION MANAGEMENT (FROM PLENUM, CC CPSU NOV 1962). 10 July 63, 8p. JPRS: 20099.
Order from OTS $0.50 63-31242

Trans. of #Avtomatika i Telemekhanika (USSR) 1963, v. 24, no. 1, p. 3-6.

DESCRIPTORS: *Cybernetics, *Economics, Social sciences, *Research program administration.

THE SIBERIAN DEPARTMENT OF THE ACADEMY OF SCIENCES USSR ON THE EVE OF THE 22ND CPSU CONGRESS. 9 July 63, 8p. JPRS: 20091.
Order from OTS $0.50 63-31239

Trans. of Akademiya Nauk SSSR. Sibirskoe Otdelenie. Izvestiya, 1961, no. 10, p. 3-9.

DESCRIPTORS: *Scientific organizations, Siberia, Scientific research, Scientific personnel.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 38. 17 Apr 63, 15p.
JPRS: 18761.
Order from OTS $0.50 63-21601

Trans. of Bumazhnaya Promyshlennost' (USSR) 1963 [v. 38, no. 1] p. 7-8; Partiinaya Zhizn' (USSR) 1963, no. 2, p. 28; Referativnyi Zhurnal. Voprosy Tekhnicheskogo Progressa i Organizatsiya Proizvodstva v Mashinostroenie (USSR) 1963, no. 1, p. 8, 11-12; and from Pravda, Moscow (USSR) 1963, 29 Jan, p. 2; Rabochaya Gazeta (USSR) 1962, 7 Dec (excerpt).

DESCRIPTORS: *Industrial production, *Economics, Conferences, Paper industry, Industrial equipment, Machine tool industry, Labor, Personnel management.

Contents:
Results of Oblast Conference in Siberia, by P. Mel'nikov and others
Timely domestically produced equipment for the paper enterprises, by V. N. Umberg
Industrial development of Smolenskaya oblast
Shortcomings in Ukranian industrial development
Specilization problems of tool making shops in Uzbekistan machine building, by A. Kokhtev
Concerning specialization of machine building industry of Moldavia, by A. Kokhtev
The way to raise labor productivity in machine building enterprises of Uzbekistan, by A. Kokhtev.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 49. 28 June 63, 44p.
JPRS: 19918.
Order from OTS $1.25 63-31144

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 4, p. 2, 70-71; and 16 selected articles from Feb-June 63 issues of 9 Russian newspapers.

DESCRIPTORS: *Industrial production, *Economics, Tires, Industrial plants, Labor, Industrial relations, Economic geology, Construction, Plastics, Conferences, Management engineering, Electrical equipment, Scientific organizations, Scientific research, Welding.

Contents:
Tire plant construction
Advertisements and worker shortage, by L. Kozhukhovskii
Classified advertisements
Natural resources of the Ukraine
Construction at the Uralmash plant, by Yu. Utkin
Substation construction
Plant reconstruction threatened, by V. Vezeberg
Plastics in bathroom fixtures, by M. Borisov
Construction in Eastern Siberia, by Yu. Kharakovskii
Industrial advertisements
Meeting of the Lithuanian sovnarkhoz union-management active, by N. S. Konovalov
Electrical equipment advertisement
Improvement and organization of scientific council functions, by K. M. Gorev
Scientific research in the economy of Siberia and the Far East, by V. O. Ruzhitskii
Gor'kii plant develops AVM-20M mill
Thermal section at Sverdlovsk Uralmash plant
Subordination of Sverdlovsk Uralmash plant noted
More welded metal structures shops in operation at Sverdlovsk Uralmash plant.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 50. 11 July 63, 17p.
JPRS: 20137.
Order from OTS $0.50 63-31265

Trans. from Pravda, Moscow (USSR) 1963, 2 June, p. 2; Pravda Ukrainy (USSR) 1963, 4 June, p. 3; Sovetskaya Estoniya (USSR) 1963, 5 June, p. 2; Sovetskaya Kirgiziya (USSR) 1963, 4 June; Sovetskaya Litva (Lithuanian SSR) 1963, 4 June.

DESCRIPTORS: *Industrial production, *Economics, Nuclear industrial applications, Conferences, Standardization, Automation, Economic geology.

Contents:
Atoms for peace, by N. Ustinovich and A. Repetina
Plenum of the Oshskaya oblast industrial party committee, by A. Akchurin
Standardization; important production reserve, by A. Vendelin
Unified plan for total mechanization and automation, by O. Spasskaya
Lithuanian national resources, by V. Mikalauskas.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 51. 17 July 63, 24p.
JPRS: 20202.
Order from OTS $0.75 63-31302

Trans. from Izvestiya (USSR) 1963, 17 June, p. 3; Kommunist Tadzhikistana (USSR) 1963, 19 May, p. 2; Leninskoe Znamya (USSR) 1963, 12 June, p. 1, 3; Pravda Vostoka (USSR) 1963, 19 May, p. 2; Sovetskaya Belorussiya (USSR) 1963, 17 May, p. 1; Sovetskaya Litva (Lithuanian SSR) 1963, 17 May, p. 2.

DESCRIPTORS: *Industrial production, *Economics, Iron industry, Conferences, Management engineering, Quality control, Construction, Maintenance, Industrial relations, Industrial equipment, Automation.

Contents:
Stolbovskii iron foundry plant
Ideological work seminar of the Pushkino city party committee
Reducing plant product lines in Tadzhikistan, by A. I. Ivanov
Delivery setbacks at the Mogilev transport-lifting equipment plant
Raising product quality and completing initiated construction projects in Lithuania
Extending equipment longevity and reducing spare parts production in Belorussia, by G. Yakovlev
Increasing shift-time use of equipment and mechanizing labor in plants of Uzbekistan, by V. Kovalev
Improving state committee-enterprise relationships in designing new equipment, by V. K. Krotov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 52. 17 July 63, 17p.
JPRS: 20216.
Order from OTS $0.50 63-31312

Trans. of Promyshlennost' Armenii (USSR) 1963 [v. 6] no. 3, p. 3-6; and from Sovetskaya Belorussiya (USSR) 1963, 2 June, p. 2; Stroitel'naya Gazeta (USSR) 1963, 29 May, p. 2; Rabochaya Gazeta (USSR) 1963, 25 May, p. 2; Sovetskaya Rossiya (USSR) 1963, 4 June; Ekonomicheskaya Gazeta (USSR) 1963, no. 9[82] p. 47-48; no. 13[86] p. 47-48.

DESCRIPTORS: *Industrial production, *Economics, Maintenance, Industrial plants, Fastenings, Oxygen equipment, Foundries, Tools.

Contents:
Dump truck red tape, by A. Pinkevich
Criticism and plundering of state property
Plant specialized in fastenings
Defective oxygen cylinders, by I. Solodilov
Equipment advertisements
Foundry production specialization, by E. Yudin
Tool improvements, by A. Grishchenko
Equipment for sale
Equipment advertisements
New achievements in Armenian industry.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 54. 18 July 63, 18p. JPRS: 20227.
Order from OTS $0.50 63-31318

Trans. from Sovetskaya Latviya (Latvian USSR) 1963, 6 June, p. 2; Sovetskaya Rossiya (USSR) 1963, 7 June, p. 1, 3; Turkmenskaya Iskra (USSR) 1963, 4 June, p. 3; 7 June, p. 2; Kommunist, Erevan (USSR) 1963, 11 May, p. 2; Trud, Moscow (USSR) 1963, 6 June, p. 2; Kazakhstanskaya Pravda (USSR) 1963, 5 June, p. 2.

DESCRIPTORS: *Industrial production, *Economics, Political science, Costs, Reduction, Machines, Construction, Quality control, Labor unions, Wastes (Industrial), Metals.

Contents:
Planned ideological work, by G. Cherevatov
Industrialization of Ryazanskaya oblast
Theoretical Conference on cost reduction in the Mary railroad worker club
Increasing quality of machine building, by I. Sochinskii
Working conditions, by S. Grigor'ev
Scrap metal procurement, by V. Nikulichev
Growth of the Kuzbass, by N. Gnilorybov
Specialization in machine building, by A. Viskovskii.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 55. 18 July 63, 18p. JPRS: 20233.
Order from OTS $0.50 63-31322

Trans. from Pravda, Moscow (USSR) 1963, 7 June, p. 2; Pravda, Leningrad (USSR) 1963, 4 June, p. 2; Sovetskaya Litva (USSR) 1963, 7 June, p. 2; Kazakhstanskava Pravda (USSR) 1963, 8 June, p. 2; Leninskoe Znamya (USSR) 1963, 2 June, p. 2 5 June, p. 4; Sovetskaya Belorussiya (USSR) 1963, 9 June, p. 4; Ekonomicheskaya Gazeta (USSR) 1963, no. 23[96] p. 47.

DESCRIPTORS: *Industrial production, *Economics, Metals, Wastes (Industrial), Industrial equipment, Effectiveness, Construction, Scientific personnel.

Nemchinov, V.
ECONOMICS AND CYBERNETICS. 24 June 63, 7p. JPRS: 19803.
Order from OTS $0.50 63-31094

Trans. from Pravda, Moscow (USSR) 1963, 31 May, p. 2.

DESCRIPTORS: *Social sciences, *Economics, *Cybernetics.

Osztrovski, Giorgi.
PREPARATION OF ANNUAL RESEARCH PLANS. 8 July 63, 9p. JPRS: 20050.
Order from OTS $0.50 63-31219

Trans. of [Magyar Tudonamyos Akademia]. Akademiai Kozlony (Hungary) 1963, v. 12, no. 4, p. 29-32.

DESCRIPTORS: *Scientific organizations, *Universities, Scientific research, Instructors.

CURRENT REVIEW OF THE SOVIET TECHNICAL PRESS: ANNUAL INDEX 12 JAN 62-11 JAN 63. July 63 [177]p.
Order from OTS $1.00 63-11646

Includes OTS nos. 60-21441-88 through 60-21441-140.

DESCRIPTORS: *Industrial research, *Scientific research, Periodicals, *Indexes

Articles indexed in this publication appeared in the Current Review of the Soviet Technical Press from January 12, 1962 through January 11, 1963. The Index is made up of three major parts: Subject Index, Author Index, and Source Indes. Entries in the Subject Index consist of article titles arranged in a numerical sequence within general subject areas. The numerical sequence is keyed to the issue and page number of the Current Review in which the article appeared. The Author and Source Indexes are alphabetical listings of

FOREIGN DEVELOPMENTS IN MACHINE TRANSLATION AND INFORMATION PROCESSING NO. 127. 19 June 63, 167p. refs. JPRS: 19746.
Order from OTS $3.00 63-31076

Trans. of Referativnyi Zhurnal. Otdel'nyi Vypusk 59: Nauchnaya i Tekhnicheskaya Informatsiya (USSR) 1963, no. 1, p. 1-116.

DESCRIPTORS: *Machine translation, *Documentation, *Information retrieval, Data processing systems, *Dissemination, Reproduction, Photographic recording media, Standardization, Library science, Scientific information centers.

BOOK REVIEWS

BR-SOV/6181
G. P. Skornyakov and others, ed.
MATERIALS OF THE THIRD URAL CONFERENCE ON SPECTROSCOPY. (Ural'skoye soveshchaniye po spektroskopii. 3d, Sverdlovsk, 1960. Materialy) Sverdlovsk, Metallurgizdat, 1962. 197p. Errata slip inserted. 3000 copies printed.

BR-SOV/6190
Skryshevskiy, Anton Frantsevich
DIFFRACTION OF X-RAYS, ELECTRONS, AND NEUTRONS IN GASES, AND THE FORMATION OF OF MOLECULES (Difraktsiya rentgenovskikh luchey, elektronov i neytronov v gazakh i stroyeniye molekul) [Kiyev] Izd-vo Kiyev. univ., 1961. 84p. 2000 copies printed.

BR-SOV/6191
Kulikovskiy, Andrey Gennadiyevich and Grigoriy Aleksandrovich Lyubimov
MAGNETOHYDRODYNAMICS (Magnitnaya gidrodinamika) Moscow, Fizmatgiz, 1962. 246p. 7500 copies printed.

BR-SOV/6193
Stepanov, Georgiy Yur'yevich
HYDRODYNAMICS OF TURBINE BLADE CASCADES (Gidrodinamika reshetok turbomashin) Moscow, Fizmatgiz, 1962. 512p. 5000 copies printed.

BR-SOV/6282
Gorenshteyn, I. A. and others.
INERTIAL NAVIGATION (Inertsial'naya navigatsiya) Moscow, "Sovetskoye radio", 1962. 248p. Errata slip inserted. 9000 copies printed.

BR-SOV/6283
Devyatova, V. A. and V. V. Kochetygov, compilers.
HANDBOOK ON HIGH-ALTITUDE VERTICAL-HORIZONTAL SOUNDING OF THE ATMOSPHERE IN THE IL-28 (Rukovodstovo po vysotnomu vertikal'no-gorizontal'nomu zondirovaniyu atmostery na samolete Il-28). Moscow, Gidrometeoizdat, 1962. 146p. Errata slip inserted. 6000 copies printed.

BR-CHEZ/6284
Jerie, Jan, ed.,
BASIC PROBLEMS IN THE CONSTRUCTION OF GAS TURBINES [COLLECTION OF ARTICLES] (Zakladni problemy ve stavbe spalovacich turbin). Prague, Nakl. CAV, 1962. 627p. 1600 copies printed.

BR-SOV/6288
Loytsyanskiy, Lev Gerasimovich
LAMINAR BOUNDARY LAYER (Laminarnyy pogranichnyy sloy). Moscow, Fizmatgiz, 1962. 479p. 7500 copies printed.

BR-SOV/6306
Lyakhov, Georgiy Mikhaylovich and Georgiy Iosifovich Pokrovskiy
EXPLOSION WAVES IN GROUNDS (Vzryvnyye volny v gruntakh) Moscow, Gosgortekhizdat, 1962. 101p. Errata slip inserted. 3000 copies printed.

BR-SOV/6313
Serebryakov, Mikhail Yevgen'yevich
INTERIOR BALLISTICS OF BARREL SYSTEMS AND SOLID-PROPELLANT ROCKETS (Vnutrennyaya ballistika stvo'nykh sistem i porokhovykh raket) 3d. ed., rev. and enl. Moscow, Oborongiz, 1962. 703p. Errata slip inserted. 5000 copies printed.

BR-SOV/6315
Tarusov, Boris Nikolayevich
INITIAL PROCESSES OF RADIATION INJURY (Pervichnyye protsessy luchevogo porazheniya). Moskva, Gosatomizdat USSR, 1962. 96p. 6500 copies printed.

BR-SOV/6321
Pogorelov, Aleksey Vasil'yevich
POST-BUCKLING BEHAVIOR OF CYLINDRICAL SHELLS. PT. 2: EXTERNAL PRESSURE (Tsilindricheskiye obolochki pri zakriticheskikh deformatsiyakh [chast' 2]: Vneshneye davleniye). Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 60p. 3000 copies printed.

BR-SOV/6322
Pogorelov, Aleksey Vasil'yevich
POST-BUCKLING BEHAVIOR OF CYLINDRICAL SHELLS. PT. 1: AXIAL COMPRESSION (Tsilindricheskiye obolochki pri zakriticheskikh deformatsiyakh [ch.] 1: Osevoye szhatiye). Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 51p. 300 copies printed.

BR-SOV/6327
Vorob'yeva, Yevgeniya Viktorovna.
CONJUNCTION OF ATMOSPHERIC PROCESSES IN THE NORTHERN HEMISPHERE (Sopryazhennost' atmosfernykh protsessov v severnom polusharii). Leningrad, Gidrometeoizdat, 1962. 115p. 1200 copies printed.

BR-GER/6337
Unsere Luftstreitkräfte.
AIR FORCE (Based on "Voyenno-vozdushnyye sily") [Berlin] Deutscher Militärverlag, 1962. 193p. 10,000 copies printed.

BOOK REVIEWS

BR-SOV/6181
G. P. Skornyakov and others, ed.
MATERIALS OF THE THIRD URAL CONFERENCE ON SPECTROSCOPY. (Ural'skoye soveshchaniye po spektroskopii. 3d, Sverdlovsk, 1960. Materialy) Sverdlovsk, Metallurgizdat, 1962. 197p. Errata slip inserted. 3000 copies printed.

BR-SOV/6190
Skryshevskiy, Anton Frantsevich
DIFFRACTION OF X-RAYS, ELECTRONS, AND NEUTRONS IN GASES, AND THE FORMATION OF OF MOLECULES (Difraktsiya rentgenovskikh luchey, elektronov i neytronov v gazakh i stroyeniye molekul) [Kiyev] Izd-vo Kiyev. univ., 1961. 84p. 2000 copies printed.

BR-SOV/6191
Kulikovskiy, Andrey Gennadiyevich and Grigoriy Aleksandrovich Lyubimov
MAGNETOHYDRODYNAMICS (Magnitnaya gidrodinamika) Moscow, Fizmatgiz, 1962. 246p. 7500 copies printed.

BR-SOV/6193
Stepanov, Georgiy Yur'yevich
HYDRODYNAMICS OF TURBINE BLADE CASCADES (Gidrodinamika reshetok turbomashin) Moscow, Fizmatgiz, 1962. 512p. 5000 copies printed.

BR-SOV/6282
Gorenshteyn, I. A. and others.
INERTIAL NAVIGATION (Inertsial'naya navigatsiya) Moscow, "Sovetskoye radio", 1962. 248p. Errata slip inserted. 9000 copies printed.

BR-SOV/6283
Devyatova, V. A. and V. V. Kochetygov, compilers.
HANDBOOK ON HIGH-ALTITUDE VERTICAL-HORIZONTAL SOUNDING OF THE ATMOSPHERE IN THE IL-28 (Rukovodstovo po vysotnomu vertikal'no-gorizontal'nomu zondirovaniyu atmosfery na samolete Il-28). Moscow, Gidrometeoizdat, 1962. 146p. Errata slip inserted. 6000 copies printed.

BR-CHEZ/6284
Jerie, Jan, ed.,
BASIC PROBLEMS IN THE CONSTRUCTION OF GAS TURBINES [COLLECTION OF ARTICLES] (Zakladni problemy ve stavbe spalovacich turbin). Prague, Nakl. CAV, 1962. 627p. 1600 copies printed.

BR-SOV/6288
Loytsyanskiy, Lev Gerasimovich
LAMINAR BOUNDARY LAYER (Laminarnyy pogranichnyy sloy). Moscow, Fizmatgiz, 1962. 479p. 7500 copies printed.

BR-SOV/6306
Lyakhov, Georgiy Mikhaylovich and Georgiy Iosifovich Pokrovskiy
EXPLOSION WAVES IN GROUNDS (Vzryvnyye volny v gruntakh) Moscow, Gosgortekhizdat, 1962. 101p. Errata slip inserted. 3000 copies printed.

BR-SOV/6313
Serebryakov, Mikhail Yevgen'yevich
INTERIOR BALLISTICS OF BARREL SYSTEMS AND SOLID-PROPELLANT ROCKETS (Vnutrennyaya ballistika stvo'nykh sistem i porokhovykh raket) 3d. ed., rev. and enl. Moscow, Oborongiz, 1962. 703p. Errata slip inserted. 5000 copies printed.

BR-SOV/6315
Tarusov, Boris Nikolayevich
INITIAL PROCESSES OF RADIATION INJURY (Pervichnyye protsessy luchevogo porazheniya). Moskva, Gosatomizdat USSR, 1962. 96p. 6500 copies printed.

BR-SOV/6321
Pogorelov, Aleksey Vasil'yevich
POST-BUCKLING BEHAVIOR OF CYLINDRICAL SHELLS. PT. 2: EXTERNAL PRESSURE (Tsilindricheskiye obolochki pri zakriticheskikh deformatsiyakh [chast' 2]: Vneshneye davleniye). Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 60p. 3000 copies printed.

BR-SOV/6322
Pogorelov, Aleksey Vasil'yevich
POST-BUCKLING BEHAVIOR OF CYLINDRICAL SHELLS. PT. 1: AXIAL COMPRESSION (Tsilindricheskiye obolochki pri zakriticheskikh deformatsiyakh [ch.] 1: Osevoye szhatiye). Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 51p. 300 copies printed.

BR-SOV/6327
Vorob'yeva, Yevgeniya Viktorovna.
CONJUNCTION OF ATMOSPHERIC PROCESSES IN THE NORTHERN HEMISPHERE (Sopryazhennost' atmosfernykh protsessov v severnom polusharii). Leningrad, Gidrometeoizdat, 1962. 115p. 1200 copies printed.

BR-GER/6337
Unsere Luftstreitkräfte.
AIR FORCE (Based on "Voyenno-vozdushnyye sily") [Berlin] Deutscher Militärverlag, 1962. 193p. 10,000 copies printed.

TRANSLATIONS IN PROCESS

[ALL-UNION CONFERENCE ON RADIATION CHEMISTRY] (NO. 2) MOSCOW, 1960.
Mono. Vsesoyuznoe Soveshchanie po Radiatsionnoi Khimii (no. 2) Moscow, 1960.
[Trudy] Moscow, 1962, 756p.

APPLICATION OF X-RAYS IN THE STUDY OF MATERIALS.
Mono. Primenenie Rentgenovykh Luchei k Issledovaniyu Materialov, Leningrad U., 1959, 125p. (Trudy no. 28)

CORROSION AND PROTECTION OF CONSTRUCTION METALS: COLLECTION OF ARTICLES.
Mono. Korroziya i Zashchita Konstruktsionnykh Metallicheskikh Materialov; Sbornik Statei, Moscow, 1961, 258p.

DATA ON STUDY OF FLORA AND VEGETATION OF THE URAL, NO. 1 (Materialy po Izucheniyu Flory i Raditel'nosti Urala, 1).
A[kademiya] N[auk] SSSR. Institut Biologii, Sverdlovsk. Trudy, 1962, no. 28, 135p.

FLUIDIZED BEDS ISSUE.
Khim[icheskaya] Prom[yshlennost'] (USSR) 1962, no. 11, p. 781-857.

HERALD OF COMMUNICATIONS, 1963 [VOL. 23] NO. 7 [280].
Vestnik Svyazi (USSR) 1963 [v. 23] no. 7 [280].

METEOROLOGY AND HYDROLOGY, 1963, NO. 7: SELECTED ARTICLES.
Meteorologiya i Gidrologiya (USSR) 1963, no. 7, p. 3-17, 28-33, 40-50, 58-61, 64.

[NEWS OF HIGHER EDUCATIONAL INSTITUTIONS, MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION USSR, RADIOPHYSICS SERIES] 1963, VOL. 6, NO. 2.
Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1963, v. 6, no. 2.

PROBLEMS OF GENERAL ELECTRICAL INSTRUMENT CONSTRUCTION.
Mono. Voprosy Obshchego Elektropriborostroeniya, Kiev, 1960, 264p.

RADIOBIOLOGY, 1963, VOL. 3, NO. 3
Radiobiologiya (USSR) 1963, v. 3, no. 3.

TRANSACTIONS OF MURMANSK INSTITUTE OF MARINE BIOLOGY, 1961, NO. 3(7).
[Akademiya Nauk SSSR]. Murmanskii Morskoi Biologicheskii Institut. Trudy, 1961, no. 3(7) p. 1-220.

UKRAINIAN JOURNAL OF CHEMISTRY, 1962, VOL. 28
Ukrainskii Khimicheskii Zhurnal (USSR) 1962, v. 28.

UKRAINIAN JOURNAL OF PHYSICS, 1962, VOL. 7.
Ukrayins'kyi Fizychnyi Zhurnal (USSR) 1962, v. 7.

Babakov, I. M.
THEORY OF VIBRATIONS.
Mono. Teoriya Kolebanii, Moscow, 1958, 628p.

Belyaev, R. A.
BERYLLIUM OXIDE: PROPERTIES AND APPLICATIONS.
Mono. Okis' Berilliya Svoistva i Primenenie, Moscow, 1962, 238p.

[Budyko, M. I., ed.].
[TRANSLATIONS OF THE ALL-UNION METEOROLOGICAL CONFERENCE (NO. 1) LENINGRAD, 1961]: SELECTED PARTS.
Mono. Vsesoyuznoe Nauchnoe Meteorologicheskoe Soveshchanie (no. 1) Leningrad. Trudy, v. 1, p. 13-26, 48-70, 81-112, 124-148, 173-180, Leningrad, 1962.

Deryugin, I. A.
INTRODUCTION TO QUANTUM RADIOPHYSICS.
Mono. Vvedenie v Kvantovuyu Radiofiziku, Kiev U., 1963.
Available from Holden-Day, Inc. Fall 1964.

Guter, R. S. and Ovchinskii, B. V.
ELEMENTS OF NUMERICAL ANALYSIS AND THEIR APPLICATIONS TO EXPERIMENTAL RESULTS.
Mono. Elementy Chislennogo Analiza i Matematicheskoi Obrabotki Rezultatov Opyta, Moscow, 1962.
Available from Holden-Day, Inc. Fall 1964.

Ivanov, A. V.
GREEN'S FUNCTIONS AND MATRICES IN OPERATOR THEORY.
Mono. Funktsii i Matritsy Grina v Operatsionnom Ischislenii, Minsk, 1963.
Available from Holden-Day, Inc. Fall 1964.

Kuzin, A. [M.].
RADIATION BIOCHEMISTRY.
Mono. Radiatsionnaya Biokhimiya, Moscow, 1962, 333p.

Leipunskii, A. I. and others.
OPERATING EXPERIENCE WITH BR-5 REACTOR.
Mono. I[nternational] A[tomic] E[nergy] A[gency] Conference on Operating Experience of Power Reactors, Vienna, June 63. [Proceedings] Paper CN-15/40.

Morozov, G. A.
USE OF DIESEL FUELS CONTAINING ADDITIVES.
Mono. Primenenie Dizel;nykh Masel s Prisadkami, Leningrad, 1962, 112p.

Papetrov, A.
INVESTIGATION CONCERNING DENDRITIC GROWTH BY CRYSTALLOGRAPHY.
Zeitschrift für Kristallographie (Germany) 1935, v. 92, p. 89-130.

Prezent, I. I., ed.
TRANSACTIONS OF THE INSTITUTE OF GENETICS, 1962, VOL. 29.
A[kademiya] N[auk] SSSR. Institute Genetiki. Trudy, 1962, v. 29, 471p.

Ruzhda, Z.
ELECTRIC RESISTIVE STRAIN GAGES.
Mono. Elektricheskie Tensometry Soprotivleniya, Moscow, 1961, 335p. (originally pub. in Czechoslovakian).

Sharai, V. N.
STUDY OF CRYSTALLIZATION IN GLASSES PRODUCED FROM EASILY MELTING CLAYS (Khimiya i Khimicheskaya Tekhnologiya Silikatnykh Materialov).
B[elorusskii] P[olitekhnicheskii] I[nstitut]. Sbornik Nauchnykh Rabot (USSR) 1960, v. 82, p. 86-165.

Shevyakova, A. A, ed.
AUTOMATIC CONTROL OF AVIATION ENGINES, 1961, VOL. 3: SELECTED ARTICLES.
Avtomaticheskoe Regulirovanie Aviadvigatelei (USSR) 1961, v. 3, p. 1-32, 51-135.

Shevyakova, A. A., ed.
AUTOMATIC CONTROL OF AVIATION ENGINES, 1962, VOL. 4: SELECTED ARTICLES.
Avtomaticheskoe Regulirovanie Aviadvigatelei (USSR) 1962, v. 4, p. 5-69, 95-135.

Shidlovskii, A. A.
PYROTECHNICS.
Mono. Osnovy Pirotekhniki, Moscow, 1954, 248p.

Sitenko, A. G.
ELECTRO-MAGNETIC FLUCTUATION IN A PLASMA.
Mono. Elektromagnitnye Fluktuatsii v Plazme.
Khar'kov U., 1963.
Available from Holden-Day, Inc. Fall 1964.

Skvortsov, V. V., Kiktenko, V. S., and Kucherenko, V. D.
SURVIVABILITY AND INDICATION OF PATHOGENIC MICRO-ORGANISMS IN THE ENVIRONMENT.
Mono. Vyzhivaemost' i Indikatsiya Patogennykh Mikrobov vo Vnesknei Srede, Moscow, 1960, 348p.

Tarusov, B. N.
INITIAL PROCESSES OF RADIATION INJURY.
Mono. Pervichnye Protsessy Luchsvogo Porazheniya, Moscow, 1962, 96p.

Timakov, V. D.
NEW METHODS IN MEDICINE. (Novye puti Meditsiny).
[Vsesoyuznoe Obshchestvo po Rasprostraneniyu Politicheskikh i Nauchnykh Znanii]. Seriya 8: Biologiya i Meditsina (USSR) 1963, no. 1, 47p.

Twardosz, Ferdynand.
DYNAMIC STABILITY OF A CONICAL SHELL UNDER LONGITUDINAL AND TRANSVERSE CONTINUOUS PULSATING LOADS.
Mechanika (Poland) 1962, no. 5, p. 3-81.

Vetchinkin, V. P.
AIRCRAFT DYNAMICS.
Mono. Dinamika Samoleta, Moscow, 1956, 422p. (Izbrannye Trudy, no. 1).

Yazdovskii, V. I.
PROBLEMS IN SPACE MEDICINE: COLLECTION OF ARTICLES BY FOREIGN AUTHORS.
Mono. Voprosy Kosmicheskoi Meditsiny: Sbornik Statei Zarubezhnykh Avtorov, Moscow, 1962, 323p.

PERIODICALS TRANSLATED COVER-TO-COVER

For basic list of Periodicals Translated Cover-to-Cover see Technical Translations Volume 10, Number 1.

This basic list is kept up-to-date by giving only changes in the subsequent issues of Technical Translations.

No changes are necessary for this issue.

AUTHOR INDEX

Author	Page
Abezgauz, N. N.	602
Abramov, V. S.	633
Abramovich, M.	678
Afonskaya, L. S.	620
Ageev, D. V.	664
Agre, V. L.	700
Airapet'yan, G. P.	628
Aivazyan, V.	703
Aizenberg, E. S.	661
Akchurin, A.	716
Akhmatov, S.	659
	660
	698
Akhumov, E. I.	647
Akopyan, K.	678
Albahari, C.	620
Albrekht, V. A.	680
Aleksandrov, A. N.	626
Aleksandrov, N. I.	609
Aleksandorvskaya, M. M.	628
Aleksidze, M. A.	692
Aleshin, V. S.	707
Alieva, V. I.	612
Alievskii, B.	676
Alimov, P. I.	633
Allakhverdyan, M. A.	627
Al'pert, Ya. L.	670
Alumyae, N. A.	693
Amelin, A. Z.	629
Amiragova, M. I.	626
Amkhanitskii, G.	666
Amosenkova, N. I.	609
Andreev, D. N.	640
Anisimov, K. N.	633
Antonov, V.	703
Apatov, V.	679
Arbuzov, A. E.	633
Arbuzov, B. A.	633
Ardenne, M. von	694
Ariano, R.	664
Arnautov, A. K.	626
Arnold, O. H.	620
Artamonov, K.	703
Artemchuk, G.	699
Artyukhina, N. I.	628
Aruthynyan, A.	704
Arutyunyan, L.	703
Asakura, T.	711
Asperger, Z.	612
Asta, G. dall'	690
Avanyan, S.	675
Averin, V. V.	697
Avshalumova, A. D.	672
Azbelev, V. V.	630
Baar, A.	654
Babakov, I. M.	B-17
Babko, A. K.	635
Babuadze, O.	699
Baev, V. A.	666
Bagdasarov, A. A.	626
Bagirov, T.	666
Bagratuni, G.	698
Baibakov, M.	660
Bairakov, V. I.	697
Bakhovkin, A. M.	694
Baklanov, V.	717
Baklanova, V. F.	613
Bakulina, E. D.	626
Bakycharov, Ya. P.	629
Barakhtin, V. N.	652
Barakina, N. F.	626
Baranova, I.	665
Barbieri, T.	694
Barbinov, V. A.	603
Barilko, N. A.	640
Barkanov, N.	676
Barkov, A.	660
Baron, G.	656
Bartels, H.	638
Bartenev, L. S.	664
Barvinskii, L. L.	664
Basin, V. E.	691
Bastein, P.	705
Bavadakova, Z. K.	619
Bazant, V.	640
Beck, A.	711
Becker, M.	599
Becker-Palossy, K.	640
Beckey, H. D.	711
Bekreshev, A.	703
Bekritskii, L. Ya.	598
Bel'ferman, K.	674
Belousov, I.	657
Belova, G.	597
Belyaev, I. A.	669
Belyaev, R. A.	B-17
Belyaev, V.	699
Belyaev, Yu. I.	711
Belyaevskii, N. A.	654
Belyanskii, V. B.	670
Belyauskas, A.	677
Berdichevskii, L. S.	630
Berenbeim, D. Ya.	630
Berezhnoi, A. S.	681
Bergfelder, E.	678
Beritic, T.	612
Berlin, L. B.	652
Berneron, R.	695
Bersenev, I.	659
Beruchashvil, K.	676
Bessonov, A. F.	651
Beuret, J.	680
Bezverkhaya, T. P.	627
Bickel, H.	622
Biernacka, T.	640
Biryukov, V.	698
Blanpin, O.	620
Bleiker, V. M.	625
Blinov, I. F.	670
Blokh, E. L.	714
Blomqvist, G.	634
Blyumberg, Ya. B.	647
Bobkov, B. N.	646
Bobyrenkyo, Yu. Ya.	685
Boceski, D.	599
Boedcher, H. F.	672
Bogatova, I. B.	630
Bogdanov, O. S.	695
Bogolyubova, V. A.	633
Bogoroditskii, I. P.	664
Boiko, E. G.	631
Boiko, N.	597
	660
Boiko, V. E.	697
Boksha, V. G.	608
Borevich, V.	669
Borisov, M.	716
Borisov, S. N.	691
Borisov, V. M.	647
Borissov, S. N.	640
Borovik-Romanova, T. F.	711
Borroni, V.	613
Bos, A.	617
Boulanger, P.	605
Bovan, G.	677
Bozhevikov, N. S.	652
Brakhnova, I. T.	633
Brasseur, P.	638
Breitenfeld, V.	612
Bremer, F. W.	621
Bremer, H.	672
Brodskii, A. I.	641
Brodskii, O.	699
Buchvarov, N.	710
Budilova, E. V.	626
Budnikov, P. P.	681
Budyko, M. I.	B-17
Bukharin, O. V.	613
Bulkin, P. S.	709
Burak, M.	680
Bürger, H.	640
Burneti, R.	609
Buryi, V. S.	633
Bussi, E.	673
Butigan, N.	612
Butorin, M. M.	652
Buy, B.	698
Bykov, S. B.	712
Cappelano, R.	613
Cardani, C.	607
Carlson, S.	610
Carlström, C. G.	700
Carugo, N.	636
Casanova, J.	641
Castell, H. C.	705
Cermak, J.	640
Cernia, E.	637
Chabbert, Y. A.	621
Chabert, F.	683
Chang, A. I.	629
Chang, Ching-hua	654
Chang, Hsüeh-chung	653
Chao, Sung-ch'iao	653
Chauzat, P.	695
Chefranov, K. A.	678
Ch'en, Ching-sheng	653
Ch'en, Yung-tsung	653
Cherchenko, I. I.	610
Cherevatov, G.	717
Cherfas, N. V.	630
Chernikova, N. V.	619
Chernomashentsev, A.	679
Chernov, V.	698
Chernyshevskaya, I. A.	628
Chertkov, I. L.	612
Chesnokov, A. S.	703
Chetverikov, L. I.	654
Chetverikova, N. P.	655
Chibisov, A. K.	606
Ching, Ch'eng-k'uei	599
Chiolan, I.	647
Chistova, Z. Ya.	613
Chistovich, L. A.	714
Chmelir, M.	648
Chu, Chen-jen	653
Chugunova, N. I.	631
Chukhrova, A. I.	626
Chumburidze, I.	665
Churin, I.	666
Chvalovsky, V.	640
Colombie, M.	705
Conti, A.	613
Crome, R.	695
Csakvari, B.	640
Cserep, G.	707
Daimov, H.	642
Damaschun, G.	640
Danilin, V. T.	614
Danilova, O. A.	626
Darenskaya, N. G.	626
Dashkevich, I. O.	610
Daubertes, C.	680
David, J.	661
Davidenko, N. K.	636
Davydov, B. E.	650
Deeva, I.	678
Degtyarenko, I.	698
Dement'ev, E. P.	601
Dement'ev, G. P.	630
Demidova, N. V.	614
Demin, N. N.	626
Demirchoglyan, G. G.	626
	627
Demychevy, A. I.	675
Dervichian, D. G.	648
Deryugin, I. A.	B-17
Devyatova, V. A.	
BR-SOV/6283	A-11
Devyatykh, G. G.	642
Dieffenbach, O.	639
Dienske, J. W.	644
Dobri, E.	602
Dobrovol'sk'kyi, V. M.	712
Dobryanskii, A. F.	642
Dogopol'skaya, P. I.	643
Doil'nitsin, P.	657
Domanski, W.	695
Donskaya, L. V.	612
Donzé, M.	700
Dormidontov, A.	677
Dorner, G.	605
Doronin, I.	660
Dörr, W.	702
Dowolf, J. F.	688
Dregol'skaya, I. N.	603
Drokova, I. G.	608
Drozdov, V.	678
	679
Drozdova, N. N.	606
Druyvesteyn, J. J.	710
Dryagin, P. A.	630
Dubinin, N. P.	602
Dubovenko, L. I.	634
Dubrov, Ya. G.	629
Dudin, V. A.	629
Dukelskii, V. M.	648
Dunenkov, M.	700
Dzyubenko, I.	598
Eckertova, L.	667
Efimov, V. V.	629
Efimova, L. F.	633
Egorov, A. D.	608
Eisenhauer, J.	673
Ekenstam, A. af	634
Elies, A.	606
Elyutin, V.	714
Emal'yanova, O. V.	626
Engelhardt, W. von	652
Erdey, L.	637
Eremin, E. N.	648
Erinov, A. E.	701
Ermilov, V.	675
Ermolaeva, T. A.	685
Ershov, A.	703
Ertel, G.	640
Etkalo, S.	674
Evdokimov, V. A.	633
Evgrafov, G. K.	664
Ezerova, E. A.	647
Faenov, Ya. I.	670
Farzaliev, M. M.	599
Fedorchenko, I. M.	694
Fedorov, N.	674
Fedorov, N. A.	621
Fedorov, V. V.	676
Fedorova, R.	679
Fedotenkov, A. G.	602
Fedynskii, V. V.	654
Felix, W.	621
Ferrero, A.	692
Ferrero, C.	692
Fester, W. F.	599
Fetisenko, I. I.	629
Fierz-David, E.	634
Figurinas, V.	669
Finat'ev, Yu. P.	694
Finkel'shtein, S. M.	664
Finogenov, S. N.	608
Fischer, F. W.	605
Fishman, L. G.	629
Florian, G.	673
Förster, W.	640
Forwerg, W.	713
Foster, S. P.	688
Foster, W. E.	642
François-Rossetti, J.	649
Frank, C. E.	642
Frankov, N. A.	633
Freidlina, R. Ch.	640
Freudenberg, K.	634
Ferymann, M.	711
Freymann, M. R.	711
Friedrich, H.	702
Frisman, E. V.	605
Fritz, G.	640
Fukuma, N.	689
Furukawa, J.	688
Furukawa, M.	661
Fyalkov, Ya. A.	636
Gabuzova, E.	665
Gakel', P. A.	683
Galich, B.	675
Galkovskaya, K. F.	626
Gallai, Z. A.	636
Gamper, N. M.	633
Ganelina, I. E.	614
Gappisch, M.	696
Garanin, E.	675
Garbar, M.	660
	688
Garzo, G.	640
Gavrilenko, M.	698
Gebhardt, I.	640
Geiger, M.	645
Geimaer, P.	640
Geinaer, P.	640
Geintse, E. A.	626
Gel'fand, G.	704
Gel'shtein, V. I.	614
	619
Gendlina, I.	697
Georgiev, G. P.	606
Georgiev, S.	605
Georgiev, V.	601
Gerburt, E. V.	639
Germanyuk, Ya. L.	615
Gershovich, I.	674
Gershun, B.	700
Giachetti, E.	690
Giken, A. Yu.	686
Gilbert, H. N.	704
Gil'm, K.	633
Gilyarov, V. A.	633
Gimesi, O.	637
Ginsburg, N. N.	609
Ginzburg, E. N.	599
Giordani, M.	671
Giovannozzi-Sermanni, G.	636
Girshin, S. G.	629
Giryn, W.	671
Gladyshev, G. I.	664
Glanert, G.	695
Glebov, G. D.	648
Glukhov, E. E.	688
Glushovskii, M. E.	664
Glussman, I.	621
Gnilorybov, N.	717
Godlevskii, P.	659
Gofman, I. A.	702
Gogin, V.	660
Gol'dberg, M. B.	628
Gol'dburt, N. N.	603
Gold'fail, L. G.	615
Gol'din, L. S.	617
Goldovskii, A. M.	601
Golovanov, Ya.	657
Gol'tsova, L. I.	693
Golubeva, G. P.	626
Goni, J. C.	656
Gonikberg, M. G.	649
Gonsior, T.	711
Gontea, I.	672
Gonzales Reyna, J.	655
Gorbadei, N. K.	621
Gorban', N. I.	650
Gorenshteyn, I. A. BR-SOV/6282	A-11
Gorev, K. M.	716
Gorin, A. I.	626
Görlich, H.-K	705
Gorlovskii, I. A.	661
Gorshunova, L. P.	614
Gorskin, I.	703
Gortinskii, E.	665
Goubeau, J.	640
Gouffé, A.	708
Govyadinov, V.	677
Gräbner, H.-J.	637
Grachev, V.	699
Graevskii, E. Ya.	626
Grafskaya, Z. S.	619
Grant, G.	669
Grasser, G.	634
Grayevskaya, B. M.	626
Grebenshchikov, A.	676
Grebtsov, I.	703
Grechkin, N. P.	633
Grein, D.	675
Grigor'ev, S.	717
Grigoryan, M.	703
Grigoryan, R.	677
Grimsen, G.	715
Grishchenko, A.	716
Grob, K.	637
Grosdova, T. Ya.	602
Grosse-Ruiken, H.	640
Gruzin, V. G.	700
Gruzinov, V. K.	695
Grzeszczyk, K.	671
Gubarev, V.	677
Gubkin, V. I.	697
Gudimenko, S.	674
Gugenheim, N.	606
Gulyaev, G. V.	642
Günther	642
Gurin, V.	660
Gusarov, V.	699
Gusev, V. E.	684
Guter, R. S.	B-17

Author	Page
Gutovskii, M. V.	679
Guttsait, E. M.	664
Gvelesiani, M.	679
Gvishyani, D.	714
Gvozdikova, Z. M.	626
Gyuzelev, L.	605
Haken, W. v.	661
Hannig, M.	634
Hansen, M.	695
Hanssen, E.	673
Harkany, I.	622
Hass	705
Hayashi, K.	690
Haydn, H.	686
Hayek, Z.	667
Heidenstam, E. J. von	672
Heimburger, N.	610
Heinrich, K.	709
Hengge, E.	640
Henkel, H.	599
Henze, E.	715
Herzog, S.	640
Hillmann, G.	606
Hilpert, S.	712
Himber, F.	696
Hirakawa, Z.	639
Hirano, K.	681
Hirokawa, K.	684
Hoeger, K. J.	635
Höger, H.	662
Hooren, C. J. van	661
Horath, W.	693
Horn, H.	701
Horstmann, D.	695
Horvat, Z.	612
Hoshi, Y.	689
Hu, K'o-ch'in	653
Hu, Shih-chih	653
Huang, Yin-hsiao	653
Husson, P.	642
Huttmann, E.	710
Illarionov, V. V.	639
Il'yuchenok, T. Yu.	633
Imai, M.	684
Imelik, B.	649
Ioffe, S. T.	633
Ioganzen, B. G.	630
Ionov, N. I.	648
Iordanskii, A.	602
Iordanskii, D.	609
Ipat'ev, V. V.	702
Ishida, S.	661
Isojima, T.	689
Istomin, V.	674
Ivanikov, I.	660
Ivanitskii, A. M.	628
Ivanov, A. I.	716
Ivanov, A. V.	B-17
Ivanov, M. V.	655
Ivanov, P.	699
Ivanov, S.	598
Ivensen, V.	704
Iwanaga, Y.	642
Izotova, T. E.	633
Jaksic, Z.	612
Jaky, M.	622
Jannelli, L.	650
Jansen, W.	701
Jaubert, G. F.	639
Jeanprost, C.	649
Jenkner, H.	640
Jerie, J.	
BR-CHEZ/6284	A-11
Jonquieres, E. D. L.	625
Jung, C.	607
Kabachnik, M. I.	633
Kaban, A. P.	643
Kagan, S. Z.	642
Kagan, Y. S.	633
Kaigorodova, G. E.	624
Kaiser, R.	693
Kakiuchi, H.	689
Kalamkaryan, A. A.	622
Kalauch, C.	685
Kalinichenko, Ya.	703
Kamio, K.	642
Kamyshnaya, M. S.	631
Kandyba, S. V.	674
Kaneko, A.	689
Kapital'nyi, V.	660
Kaplin, P. A.	657
Kaplun, N. A.	608
Kaplyanskii, A. E.	679
Kapustin, P.	669
Karabaev, E. M.	626
Karasiichuk, A.	660
Karavaiko, G. I.	655
Karhunen, K.	692
Karibskii, V. V.	677
Karkokha, P.	674
Karnolenko, N.	679
Karpyuk, S. A.	615
Karyakin, A. V.	606
Karyakin, V. F.	697
Kasai, J.	712
Kasatkin, A. G.	642
Kashanskii, M.	699
Kashnikov, N.	677
Kato, J.	642
Katsnel'son, B. A.	627
Kawano, K.	642
Kazanova, L. I.	602
Kazanskii, B. A.	661
Kazarnovskii, D. S.	680
Kazennov, Yu. I.	696
Keberle, H.	624
Kedrov, F.	703
Kendler, E.	701
Kennedy, R. M.	689
Khachikyan, V.	659
Khalimbekov, M. M.	599
Khamaide, L. L.	626
Kharakovskii, Yu.	716
Kharkevich, A. A.	714
Kharkevich, D. A.	620
Khaunina, R. A.	612
Khaustova, I. M.	606
Khmel'kovskaya, E.	666
Kho, I-khion'	615
Khomutin, M. S.	642
Khomyak, T. N.	629
Khotoyanovich, S. I.	686
Khotulev, N.	666
Khristov, V.	710
Khursik, P.	660
Kiermeier, F.	673
Kiktenko, V. S.	B-18
Kim, E.	676
Kireev, V. A.	649
Kirillova, F. M.	609
Kirov, S. M.	675
	678
Kirpichnikov, I.	674
Kirsanov, A. V.	633
Kir'yakov, G. Z.	649
Kiryasov, V.	597
Kiselev, A. V.	649
Kislyakov, A. G.	710
Kiss, S. A.	637
Kitaev, B. I.	696
Kitazawa, T.	686
Klaz, S. I.	688
Kleiner, K. E.	637
Kleinman, I. L.	669
Klemparskaya, N. N.	626
Kleuters, W.	691
Klimenko, V.	660
Klyachina, K. N.	627
Klyatskin, I. G.	601
Knyp, V.	660
Kobayashi, M.	661
Kobayashi, Y.	689
Koblov, G. A.	603
Kobyakov, N. M.	609
Kochendorfer, A.	701
Kochetygov, N. I.	629
Kochetygov, V. V.	
BR-SOV/6283	A-11
Kocon, Z.	640
Kohler-Kubelka, N.	612
Kojima, S.	642
Kokhanov, A.	677
Kokhtev, A.	716
Kolobova, N. E.	633
Kolokolov, V. N.	664
Kolomeitseva, I. A.	628
Komarova, I. N.	614
Kondratenko, G.	703
Kondrat'eva, E. N.	611
König, W.	696
Kononenko, V. T.	598
Kononov, B. N.	664
Kononov, S. F.	704
Konovalov, N. S.	716
Konstantinov, O. V.	705
Konstantinov, V. A.	629
Korablev, L.	677
Koranyi, A.	622
Korenevich, L.	697
Korenskoi, V.	703
Korganova, A. N.	622
Korneeva, N. V.	626
Kornilesku, A.	647
Korobov, I. I.	698
Korol'kov, D. V.	600
Koryukin, V. I.	714
Kosarev, N. N.	682
Koshmarov, Yu. A.	694
Kosov, B. M.	697
Kosterin, S. I.	694
Kostyakov, V. N.	701
Kotovshchikov, V.	700
Kovalenko, P. P.	629
Kovalev, E. E.	626
Kovalev, V.	716
Kovaleva, N. V.	649
Kovanen, M.	691
Kovba, L. M.	712
Kovyazina, L. E.	683
Kozhukhovskii, L.	716
Kozinets, G. I.	602
Kozlov, G. I.	642
Kozlov, Yu. P.	626
Kozlova, E. N.	633
Kraevskii, Ya. M.	614
Krahmer, W.	685
Krainova, K. M.	684
Krasnovskii, A. A.	606
Krasnykh, I. G.	626
Krasovskii, N. N.	668
Krause, A.	650
Krause, E.	643
Krayz, A. G.	669
Krevelen, D. W. van	661
Krichevskii, A.	659
Kriegsmann, H.	640
Krisch, A.	696
Krogius, F. V.	631
Krokha, V. A.	694
Krokhin, E. M.	657
Kronacher, H.	662
Krotov, V. K.	716
Krüger, P.	656
Kruglikov, R. I.	628
Krustanov, L. K.	601
Kryinski, K.	650
Krzikalla, H.	643
Kuang, Pin-hsien	653
Kubertavichyus, A.	597
Kucherenko, A. E.	615
Kucherenko, V. D.	B-18
Kuczynski, T.	662
Kudryavtsev, A.	660
Kukhtin, V. A.	633
Kuklev, V.	674
Kulagina, O. S.	715
Kuleshova, R.	600
Kulikovskiy, A. G.	
BR-SOV/6191	A-11
Kumanin, K. G.	662
Kuo, I-hsein	714
Küpperbusch, H.	702
Kurashov, S. V.	615
Kurilenko, O. D.	643
Kuroyanagi, S.	622
Kurpichnikov, V. S.	630
Kushnir, F. V.	664
Kuszmann, A.	640
Kutateladze, K. S.	696
Kutyakov, A. F.	670
Kutyurin, V. M.	606
Kuzin, A. M.	626
	B-17
Kuz'mich, V. I.	664
Kuz'min, Yu. P.	703
Kuznetsov, B. F.	598
Kuznetsov, F.	703
Labutin, A. L.	685
Lagrange, E.	616
Lagunova, I. G.	629
Lambina, V. A.	626
Landmann, K.	639
Langauer, D.	662
Lapan, I.	659
Lapteva, N. N.	611
Lapytov, M.	667
Lardera, M. R.	637
Lasocki, Z.	640
Lässig, W.	687
Lasztity, S.	640
Lavrishchev, D. N.	652
Lazarev, N. I.	616
Lazarev, S. L.	696
Lazarevskii, M. A.	608
Lazutin, A.	699
Lebedev, N. V.	679
Lebedev, V. D.	602
Lebedeva, G. D.	626
Lebedinskii, I.	717
Lei, Ming-te	653
Leipunskii, A. I.	B-17
Leiss, M.	705
Lemberger, A.	700
Lenin, V. I.	666
	678
Lenkevich, M. M.	633
Leonardi, G.	616
Lepeshkin, V.	598
Lepetov, Yu.	597
Lestev, A. V.	631
Lestienne, A.	650
Letova, R.	703
Levin, M. S.	709
Levinos, S.	687
Levitina, N. A.	626
Lezgintsev, G.	704
Li, Hsiao-fang	653
Li, Po	653
Liberman, A. L.	661
Licht, K.	640
Liloyan, G.	666
Lindner, A.	712
Litvinov, S.	677
Liu, Tsun-hai	653
Liu, Tung-sheng	652
Livshits, L. S.	696
Liyv, E. Kh.	629
Lkimova-Cherkasova, V. I.	603
Lobachev, G. F.	598
Lobanov, Yu. V.	705
Lobastov, Yu. P.	714
Lobko, A. F.	616
Loginov, L.	674
Loginova, A.	600
Lomako, A. V.	684
Lombard, J.	655
Lomonosov, M. V.	626
Lotte, V. D.	609
Lou, T'ung-mou	653
Loytsyanskiy, L. G.	
BR-SOV/6288	A-11
Lozano Garcia, R.	655
Lozovskii, D. V.	611
Lübben, H.	652
Luganova, I. S.	602
Luirya, A. R.	611
Lutsenko, D. A.	629
Lyakhov, G. M.	
BR-SOV/6306	A-11
Lyalikov, K. S.	687
Lysenko, A.	660
Lyubimov, G. A.	
BR-SOV/6191	A-11
Lyubimova-Gerasimova, R. M.	626
Lyubimova, T. G.	631
Lyutin, M. F.	598
Ma, Tsai-t'ao	653
Magazanik, L. G.	633
Magnac-Vallette, D.	705
Magrassi, F.	616
Maiboroda, G. M.	610
Maiskii, I. N.	628
Maki, H.	687
Maklov, A.	660
Makovskii, S. A.	682
Maksimov, S. K.	701
Maksimovich, K.	659
Malevanii, M.	677
Malevynnyi, V. A.	685
Malezhik, A.	666
Malkhasyan, M.	703
Mamedov, P. G.	626
Mangin, F.	695
Mankevich, E. M.	631
Mansurov, Kh. Kh.	616
Manteifel, V. M.	626
Mant'eva, V. L.	606
Mantsev, B. M.	652
Mao, Shou-bei	615
Markicevic, A.	612
Markov, V.	678
Markova, L. V.	637
Markovich, G.	700
Maros, L.	646
Marshak, M. E.	604
Maryushkin, L.	699
Maslov, V. V.	666
Maslova, T. N.	609
Mastryukova, T. A.	633
Mateiko, N.	665
	676
Matetskii, G.	659
Matrosova, I. A.	598
Matsuda, Y.	662
Mattes, L.	639
Matveev, K. I.	643
Matveev, Yu.	674
Matyushin, P.	703
Mchedlishvili, G. I.	604
Medved', T. Ya.	633
Medvedev, Zh. A.	606
Meerssche, M. van	690
Mehl, J.	657
Meisel', M. N.	610
	626
Mekler, L. B.	611
Mel'chuk, I. A.	714
Meleshchenko, V.	660
Melkumova, T. L.	611
Melkumyan, S.	698
Mella, F.	686
Mel'nikov, D. A.	694
Mel'nikov, I.	674
Mel'nikov, N. N.	633
Mel'nikov, P.	716
Mel'nikov, V. N.	694
Mencikova, J.	684
Merkulov, A. M.	598
Messineva, M. A.	671
Metzger, J.	639
Miao, Fu-en	652
Mikalauskas, V.	716
Mikhailik, G.	660
Mikhailov, N. V.	689
Mikhailova, N. G.	628
Mikhel'son, M. Ya.	633
Mikhina, V. N.	704
Miklashevskii, V. E.	628
Millard, J.	668
Milosevic, B.	612
Milovskaya, E. G.	643
Minaev, N. F.	626
Minaev, P. F.	628
Minin, A. A.	678
Minkh, A. A.	608
Mironov, V. L.	664
Mironov, V. R.	640
Mirzoev, A. A.	666
Mito, M.	662
Mitrofanov, P. I.	633
Mitrokhin, Yu. A.	630
Miwa, I.	643
Miyahara, J.	681
Miyajima, S.	622
Miyake, T.	689
Miyata, A.	681
Mizonov, E. D.	684
Mizukami, Y.	681
Mochalina, A. S.	626
Moeschlin, S.	622
Moiseev, P. A.	599
	630
	653
Molchanov, P.	660
Momigny, J.	690
Mooser, E.	711
Mori, A.	637
Moriyama, T.	712
Morozov, G. A.	B-17
Morozov, I.	698
Moshentseva, L. V.	611
Mourgue, M.	646
Movshev, B. E.	612
Movshovich, I. A.	629
Mravunac, B.	612
Mshvenieradze, B.	660
Mtschedlischwili, W. A.	697
Müller, R.	638
	639
	640
Mund, W.	690
Murashige, T.	663

Author	Page
Murata, Y.	638
Murav'ev, V.	665
Mushin, Ya.	676
Mustafaev, R. I.	645
Muthmann, W.	639
Myasishchev, V. N.	617
Mymrin, M. G.	670
Myshetskii, M.	699
Nadareishvili, K. Sh.	628
Nagahama, T.	634
Nagel, A. v.	650
Nagy, J.	640
Naidin, K.	659
Nakahara, M.	712
Nakahara, Y.	662
Nakajima, E.	684
Nakamura, K.	687
Nakashige, S.	684
Nakayama, Y.	688
Nakhil'nitskaya, Z. N.	626
Nakoryakov, V.	700
Nalbandyan, A. B.	650
Nametkin, N. S.	640
Nartov, Yu. A.	669
Nartova, E. T.	669
Natroi, T.	690
Natta, G.	690
Naudin, F.	709
Nauta, W. T.	644
Navrotskii, A.	677
Nazarov, A. V.	598
Nazarov, I. N.	644
Nazarov, N.	676
	677
Nazarova, L. M.	644
Nedyuzhin, A. A.	643
Nefedov, O. M.	640
Negro, G.	613
Neiman, A. A.	630
Nekrasova, V. A.	644
Nemchinov, V.	717
Nenninger, L.	683
Nesmayanov, A. N.	645
Nesterov, L. V.	633
Neumann, K.	650
Nicolai, H.-J.	645
Nieschulz, O.	617
Nifant'ev, E. E.	645
Nikabadze, O.	666
Nikiforova, V. A.	649
Nikishin, G. I.	645
Nikitina, N. N.	613
Nikolaenko, E. G.	696
Nikolaenko, T.	697
Nikolaev, V. I.	629
Nikol'skii, G. V.	602
	631
Nikonorov, I. V.	631
Nikonorov, K. V.	633
Nikulichev, V.	717
Nilov, Yu.	666
Ninai, K.	643
Noack, D.	691
Noakawa, J.	689
Novikov, P.	660
Novikova, N. R.	687
Novokshonov, P.	659
Novoselov, N. N.	645
Novozhilov, B. F.	704
Nozadze, T. V.	696
Nozdryukhina, L. R.	624
Nudel'man, A. V.	652
Nuridzhanyan, G.	703
Nyuberg, N. D.	600
Obrosov, A. N.	608
Odo, K.	642
Ofia, A. I.	623
Oganesyan, Dzh.	676
Oganesyan, Yu. Ts.	705
Oganov, K. A.	682
Ogloblina, L. I.	646
Okamura, S.	690
Okhlobystin, O. Yu.	647
Onyshchenko, M.	659
Ooue, S.	687
Opitz, H.	696
Oppenheim, A.	645
Ordelov, G.	666
Oreshkin, P. T.	712
Orlokovskii, A. A.	664
Orlova, S. I.	704
Orsini, P. G.	650
Osipov, A. M.	643
Osipov, V. O.	664
Ost, H.	663
Ostanovskii, T.	715
Oster-Volkov, N.	659
Osteux, R.	605
Osztrovski, G.	717
Otani, M.	681
Ovcharenko, E.	703
Ovchinskii, B. V.	B-17
Ozaki, M.	690
Ozawa, S.	684
Paikin, D. M.	633
Pakhomov, A. M.	645
Pakhomov, I.	666
Palatskii, M.	665
Palek, B.	714
Pallvarinne, V.	700
Panikarovskii, V. V.	626
Panzhin, T.	703
Papadache, I.	668
Papetrov, A.	B-17
Parel', V. I.	705
Paribok, V. P.	626
Pariiskii, Yu. N.	600
Paschal, F.	696
Pasquon, I.	690
Pasynskii, A. G.	607
Pateev, A. Kh.	631
Paton, E. O.	676
Paton, O. E.	678
Pavlov, L.	677
Pavlov, T. D.	601
Pavlova, E. B.	628
Pavlushkin, N. M.	682
Pellet, M.	624
Pepperhoff, W.	713
Perel'man, E. L.	604
Peresada, G. I.	713
Perini, E.	607
Permyakov, V. M.	681
Pershin, S. P.	680
Peskov, B. E.	652
Petrenko, A. I.	664
Petrov, A.	676
Petrov, E.	601
Petrov, I. N.	675
Petrov, K. A.	645
Petukhov, G. K.	702
Petukhov, V.	598
Piechowicz, T.	663
Pigin, V. M.	629
Pikelis, G.	675
Pinkevich, A.	716
Pino, P.	690
Pinus, N. Z.	653
Piozzi, F.	607
Pisarevskii, Yu. S.	609
Plattner, P. A.	645
Ploetz, T.	638
Plotnikova, E. D.	626
Pobedinskii, A. V.	608
Podlevskii, A. F.	617
Pogorelov, A. V.	
BR-SOV/6321	A-11
BR-SOV/6322	A-11
Pohl, H.	701
Pointkovskii, I. A.	628
Pokrovskiy, G. I.	
BR-SOV/6306	A-11
Polack, H.	643
Polak, L. S.	663
Polezhaev, E. F.	623
Poli, L.	690
Polikarpova, L. I.	626
Pologov, G. F.	666
Polrivskii, E. A.	633
Polyakov, E. A.	658
Pomerants, L. B.	655
Ponomarenko, V. A.	640
Ponomarev, V. N.	709
Ponyatovskii, E. G.	713
Popkov, V. I.	709
Poplavko, Yu. M.	664
Popov, S.	679
Popov, Yu. A.	679
Popova, N.	683
Poroshin, V.	666
Portevin, P. A.	701
Portugalov, S. O.	629
Pospelova, G. N.	615
Possidoni de Albinati, J. F.	638
Potul'nitskii, P. M.	610
Povitskii, N. S.	640
Presman, A. S.	626
Prezent, I. I.	B-17
Pridantsev, M. V.	697
Privolnev, T. I.	632
Probatov, A. N.	630
Prodan, S.	660
Prokhonchukov, A. A.	626
Prokof'ev, M.	714
Proletkin, V.	704
Protopopova, E. M.	626
Przepiorkiewicz, I.	687
Pudovik, A. N.	633
Pukhov, G. E.	693
Pupp, W.	710
Pushkar', N. S.	602
Putilin, N. I.	673
Puzrin, I.	660
Pylaev, B. F.	663
Pyriki, C.	638
Quevauviller, A.	620
Quilico, A.	607
Rabinovich, I.	676
Rabinovich, Yu. M.	640
Rachiba, G. I.	623
Rady, G.	637
Raeva, N. V.	626
Ramseier, H. R.	623
Raspe, F.	640
Rass, T. S.	632
Rathke, F. W.	623
Ratner, A. I.	674
Rausch, K.	713
Raz, B.	707
Razumov, A. I.	633
Razumovskaya, L.	703
Redin, N.	699
Reimann, M.	701
Renault, J.	620
Repetina, A.	716
Reut, I. A.	633
Reveil, C.	695
Revis, V. A.	602
Reynolds, J. L.	696
Richter, G.	695
Richter, H.	707
Riessner, D.	612
Riskin, S.	676
Riu, Pin-tsiu	600
Rivolta, B.	697
Roche, J.	646
Rochov, E. G.	640
Rockl, H.	617
Rodionov, V.	660
Rodriguez Pazques, R. H.	638
Rodziewicz, W.	640
Roesler, H.	639
Roginskii, V. Yu.	664
Romanov, V.	666
Roques, C.	697
Rosciszewski, P.	640
Roslavleva, N. C.	617
Rossa, F. B. la	618
Rossi, R.	621
Rotzsche, H.	640
Royen, P.	713
Rozenberg, G. Ya.	612
Rozenblat, Yu. F.	674
Rozhkov, V.	597
Rubinshtein, M. V.	652
Rubinshtein, Yu. I.	672
Rudkovskii, D. M.	646
Rühlmann, K.	640
Ruidisch, I.	640
Runge, F.	640
Rusberg, E.	599
Rusnak, V. A.	675
Rustamov, E.	660
Rutishauser, H.	692
Ruzhda, Z.	B-17
Ruzhitskii, V. O.	716
Ryabchikov, E.	670
Ryabkov, V. F.	664
Rybal'skii, V.	664
Rytov, S. M.	709
Saal, R.	668
Sabirova, G. V.	682
Sadych-Sade, S. I.	640
Safaryan, A. S.	
BR-SOV/6282	A-11
Saibel', A. G.	668
Sakharov, A. P.	664
Saksonov, L.	675
Salikhov, A. G.	652
Salyaev, V. N.	633
Samarin, A. M.	697
Sanin, P. I.	633
Sanukov, A.	677
Sarkisov, A. A.	707
Sarkisyants, E. A.	598
Sason, N. S.	697
Satarov, N.	678
Sato, F.	687
Savitskii, I.	697
Savvaitova, K. A.	632
Sazhin, N.	704
Sazonov, N. V.	633
Scanu, A.	616
Schabio, F.	701
Schalk, E.	687
Schemel, J.	650
Scheneck, H.	702
Schiffermüller, R.	702
Schlaak, W.	623
Schliephake, O.	650
Schmeling, P.	706
Schmets, J.	707
Schmidbaur, H.	640
Schmidt, H.-E.	707
Schnell	642
Schnell, H.	690
Scholler, H.	635
Scholz, O.	710
Schönherr, M.	640
Schott, G.	640
Schroeder, R.	638
Schulepnikova, A. G.	702
Schulz, E.	668
Schumann, H.	640
Schweitzer, R.	696
Schwick, G.	610
Sedykh, A. S.	633
Seidl, K.	657
Seits, I. F.	602
Seitzer, D.	709
Selivra, A. I.	602
Selyanin, F.	698
Selyunin	660
Semagin, V. N.	628
Semechkina, A. F.	646
Semenov, P.	699
Semenovich, N. I.	624
Semenovskii, A. V.	644
Semiokhina, A. F.	626
Sengfelder, G.	697
Serebryakov, M. Y.	
BR-SOV/6313	A-11
Serebryanaya, S. G.	672
Seredin, M. V.	666
Serenkov, G. P.	608
Sergienko, S. R.	650
Serikof, I.	598
Sgall, P.	714
Shabadash, A. L.	626
Shabanova, M. P.	633
Shakhari, I.	675
Shakhnazarov, G. M.	618
Shalamov, Yu.	677
Shalygin, D.	674
Shamagin, L. F.	651
Shapiro, I. D.	633
Shapiro, N. I.	626
Sharai, V. N.	B-17
Sharov, V. K.	669
Shavrin, A.	667
Shchedrina, R. N.	626
Shchukin, A. N.	670
Sheina, N. M.	636
Sher, E. S.	710
Sheradze, Sh.	677
Shestopalov, L. A.	652
Shevchenko, V. B.	635
	640
Shevtsov, Yu.	660
Shevyakova, A. A.	B-17
Shidlovskii, A. A.	651
	B-18
Shikhov, B.	679
Shilov, A. E.	646
Shilov, E.	646
Shilova, A. K.	646
Shirochin, A. N.	629
Shishikin, N. S.	629
Shkhinek, E. K.	626
Shkulev, A.	704
Shlapnikov, Yu. A.	651
Shlezinger, M. I.	664
Shmelev, L.	660
Shmeleva, N. I.	626
Shmidt, V. S.	635
Shmuk, A. A.	600
Shokin, N.	663
Shorygina, N. N.	646
Shpagina, M. K.	611
Shugaev, B. B.	633
Shuikin, N. I.	644
Shuleikin, V.	653
Shulga, V. A.	680
Shul'man, I. A.	
BR-SOV/6282	A-11
Shul'ts, V. L.	652
Shultz, H.	691
Shulyatikova, A. Ya.	626
Shushunov, V. A.	651
Shusyakov, A. P.	608
Sieckmann, W.	701
Silaev, M. P.	626
Silina, E.	660
Sitenko, A. G.	B-18
Simonov, D. A.	598
Skadovskii, S. N.	671
Skakov, Yu. A.	701
Sklyar, V. T.	682
Skornyakov, M. M.	682
Skryshevskiy, A. F.	
BR-SOV/6190	A-11
Skvortsov, V. V.	B-18
Slavnov, V. N.	626
Slobodskaya, V. P.	607
Slutsker, Ya. I.	598
Smirnova, O. I.	626
Smolenski, K.	663
Smolenskii, V. M.	710
Smolyar, I.	704
Snobl, D.	640
Sochinskii, I.	717
Sokolovskii, O. P.	697
Sokurova, E. N.	626
Solano Aguilar, E.	624
Solmantsev, M. S.	717
Solntsev, G. S.	709
Solodilov, I.	716
Solov'ev, Yu. I.	626
Solov'eva, N.	666
Sorokin, V. P.	632
Sorokin, V. S.	702
Sorokina, L. S.	618
Spackeler, G.	655
Spasskaya, O.	716
Specketer, H.	704
Spekhov, E.	698
Spenskaya, V. I.	671
Spondr, V.	686
Spynu, E. I.	633
Spyra, W.	713
Stahuljak, D.	612
Stanislavskii, L.	666
Staritskaya, L. N.	673
Stashkov, A. M.	626
Stefanovich, A.	717
Stein, G.	705
Steinert, H.	687
Stempnevskaya, M. R.	633
Stenger, V.	707
Stepanov, G. Y.	
BR-SOV/6193	A-11
Stepanov, E. M.	633
Stetsenko, A.	660
Stoltzenberg, H.	646
Strazhevskaya, N. B.	626
Striegel, H.	695
Stroikova, K. V.	624
Struchkov, V. A.	626
Strunin, B. N.	647
Stumpf, K. E.	711
Sudakov, Yu.	679
Sulaeva, L. S.	626
Sultanov, F. F.	604
	612
Sumarukov, G. V.	626
Sun, Tse-yun	680
Sunaric, R.	612
Sushko, M.	698
Suss, H.	663
Svetovidov, A. N.	632
Sviridov, G. G.	630
Syritskaya, O. S.	684
Szekely, T.	640

Author	Page
Tabouis, F.	671
Tadokoro, H.	686
Takagi, R.	685
Takahashi, R.	684
Takenishi, T.	638
Tara, S.	624
Tarabrin, B.	676
Taranenko, A. G.	604
Tarasenko, M.	698
Tarasov, B.	683
Tarip	617
Tarnopol'skii, Yu.	667
Tarusov, B. N.	B-18
BR-SOV/6315	A-11
Telenga, N. A.	600
Telitchenko, M. M.	602
Tellier, H. le	624
Temchin, E.	676
Ten, N.	703
Tevyan, G.	666
Thanheiser, G.	702
Thies, W.	617
Tikhomirov, V. I.	702
Timakov, V. D.	B-18
Tishchenko, S.	698
Titov, V.	666
Tognon, G. P.	664
Toitot, M.	697
Tokareva, L. G.	689
Tokarskaya, V. I.	626
Tolimenchuk, L. F.	664
Ton, A.	621
Tonami, N.	690
Topchiev, A. V.	663
Toron, L.	656
Totskaya, A. A.	626
Traeger, J.	624
Traube, J.	651
Treadwell, W. D.	651
Trefilova, G.	677
Trifel, A. G.	646
Tripod, J.	624
Trubaeva, L. N.	629
Trukhanov, V. G.	642
Trunov, V. K.	712
Tschernyscheva, T. I.	640
Tseitlin, A. B.	702
Tseitlin, P. I.	626
Tselikov, A.	697
Tseng, Chao-lun	674
Tsuji, F.	651
Tsuruta, T.	688
Tsvang, I. M.	672
Tsypin, A. B.	626
Twardosz, F.	B-18
Tyagunov, G. A.	664
Tyutin, A. A.	664
Uchiyama, H.	685
Ueda, H.	687
Ueda, S.	651
Ueno, K.	643
Ugleva, A. I.	600
Ulovich, A. I.	618
Ulrich, H.	687
Ul'yanov, M. I.	626
Ul'yanov, M. Yu.	609
Umbatov, A.	669
Umberg, V. N.	716
Usachev, I.	698
Usakovskaya, T. S.	626
Usakovskii, A.	679
Usatii, D.	674
Ushatikov, N.	679
Uspenskaya, E. N.	633
Uspenskaya, M. S.	626
Uspenskaya, V. I.	671
Ustinovich, N.	716
Utkin, Yu.	716
Utsunomiya, T.	712
Uzina, R. V.	691
Uzumov, I. G.	658
Uzunkoyan, P.	659
Vaganay, J.	671
Vain, V.	659
Val'chur, O. M.	629
Valibekov, Yu.	660
Valugin, K. N.	697
Vancso, S. I.	646
Vanovski, B.	612
Vartan'yants, S.	703
Vashets, N. I.	674
Vasilenko, V. T.	635
Vasil'ev, V. V.	687
Vasil'ev, Yu. M.	619
Vavilov, S.	699
Vdovin, V. M.	640
Velteev, V.	659
Vendelin, A.	716
Vendik, O. G.	664
Vendt, V. P.	608
Veselinov, M.	605
Vetchinkin, V. P.	B-18
Vezeberg, V.	716
Villafaña, A.	656
Vince-Ribaric, V.	612
Vinetskii, Yu. P.	626
Vinograd-Finkel', F.R.	602
Vinogradov, G. V.	633
Vinogradova, V. S.	633
Viskovskii, A.	717
Vladimirov, V. I.	630
Vladimirov, V. S.	692
Vladimirskii, V. V.	706
Vlasov, A.	698
Vlasov, V. G.	651
Vlodavets, V. V.	609
Vodopija, I.	612
Vodzinskii, B.	666
Vogel, R.	705
Vogt, G.	645
Vogt, U.	624
Volchkov, B. P.	619
Volfkovich, S. I.	600
	652
Vol'kenau, N. A.	645
Volkova, M. I.	633
Volkova, T.M.	626
Volynkin, N. I.	646
Vol'pova, E. G.	646
Vorberg, G.	683
Vornokov, M. G.	640
Vorob'ev, E. A.	664
Vorob'yeva, Y. V. BR-SOV/6327	A-11
Voronoi, Yu. Yu.	602
Vorovich, I. I.	693
Vovk, A. A.	658
Vozar, L.	673
Vukulovskaya, G. V.	715
Vunnikova, S. V.	633
Vysotskaya, N. A.	641
Wahl, R.	638
Wang, Shih-mu	674
Wang, Tao-siung	600
Watanabe, A.	651
Wegscheider, R.	657
Weise, P.	640
Weiss, L.	639
Weissenfels, F.	691
Werner, W.	651
Weyde, E.	686
Whang, Siar-hong	651
Widmaier, O.	683
Wieber, M.	640
Wiethoff, G.	702
Wilborn, W.	640
Wild, W.	668
Wille, A.	712
Wincierz, P.	707
Winnacker	705
Wittich, E.	656
Wittmer, G.	636
Woldan, E.	643
Wolf, E.	640
Wolf, F.	640
Wolski, W.	650
Wannagat, U.	640
Woo, Chung-sung	600
Yakhontova, V. E.	626
Yakovchuk, N.	659
Yakovlev, G.	716
Yamada, S.	689
Yamamoto, R.	689
Yamaura, R.	681
Yambaev, V.	597
Yan, Uei-kon'	615
Yang, Jen-chang	653
Yang, Ming-te	654
Yang, Shu-k'uan	653
Yang, Tsung-kan	653
Yanovskaya, N. K.	605
Yanulov, K. P.	632
Yarmonenko, S. P.	626
Yaroshenko, J. G.	696
Yastrebov, G.	659
Yin, Hsin-yun	714
Yu, Shou-chung	653
Yudin, E.	716
Yudin, V. M.	710
Yurov, Yu. Ya.	664
Yutkin, L. A.	693
Yuyama, S.	684
Zagar, Z.	612
Zagvozdkin, K. I.	640
Zaidman, N.	680
Zakar'yan, M. M.	715
Zakharkin, L. I.	647
Zakharov, V. I.	687
Zakhar'yan, A.	665
Zakrzewski, J.	678
Zakusov, V. V.	620
Zambriborshch, F. S.	632
Zambrovskii, V. A.	674
Zanala Saenz, A.	625
Zarzycki, J.	709
Zaslavskaya, R. M.	625
Zasukha, A.	715
Zav'yalov, A. S.	664
Zdanovskii, A. B.	647
Zedginidze, E. N.	696
Zeimal', E. V.	620
Zemskaya, K. A.	632
Zenchenko, A.	597
Zenin, I.	699
Zhemaitis, B.	665
Zhigarev, A.	602
Zhmeido, A. T.	619
Zhmud', P. N.	659
Zhurablev, V. F.	681
Zhuravskaya, S. A.	633
Zil'ber, L. A.	619
Zimmermann, S.	674
Zinov'eva, I. S.	611
Zlataric, B.	608
Zlatopol'skii, M. Ya.	674
Zlobin, I.	674
Zolotnitskii, R. I.	625
Zolotov, B.	660
Zolotova, E. F.	671
Zorin, A. D.	642
Zubovich, V. S.	629
Zvezdov, I.	698
Zvyagintsev, D. G.	610
Zysina-Molozhen, L. M.	713

SUBJECT INDEX

Subject	Page	Number
Abdomen	615	63-19368
Abortion	623	63-14409
Abrasives	702	63-16537
Absorption (Physiology)	621	62-24332
Absorption spectrum	686	ATS-29Q69J
	711	63-14232
		BISI-3247
Abstracts	601	63-31127
		63-31157
		63-31326
	633	63-15758
	652	63-31151
		63-31349
	658	63-31329
	667	63-31050
	682	63-19577
	692	63-31165
	694	63-31123
	708	63-31038
		63-31152
		63-31156
		63-31212
		63-31229
		63-31325
Acetaldehydes	641	63-16430
	690	SA Code-P-116
Acetates	637	63-14706
	644	63-16185
	685	ATS-80Q69J
Acetic acids	600	63-14030
	641	63-16430
	645	ATS-47Q69R
Acetyl plastics	690	SA Code-P-116
Acetylcholine	626	AEC-tr-5428
Acetylenes	642	ATS-21Q70R
Acipenseridae	631	NRCC C-4443
Acoustic nerve	612	62-11763/4
Acrylic resins	688	SA Code-P-120
		SA Code-P-121
	689	SA Code-P-115
	690	SA Code-P-112
	691	63-23376
Acrylonitriles	638	63-18024
	688	SA Code-P-120
	690	SA Code-P-112
Actuators	679	63-19492
Adaptation (Physiology)	603	63-31087
	632	NRCC C-4458
Addiction	613	63-16575
Additives	633	63-31158
Adhesives	681	SA Code-P-113
		SA Code-P-167
		SA Code-P-170
Adrenal cortex	619	63-19015
Adrenal glands	604	63-31198
	626	AEC-tr-5428
Adsorption	649	62-14568
		63-14709
	651	ATS-88Q69J
Aeroionotherapy	608	63-31304
Aeronautics	658	63-19434
Age	631	61-31036
Agriculture machinery	597	63-31226
		63-31231
		63-31259
	598	63-31275
		63-31276
		63-31287
		63-31296
Agriculture	598	63-31275
		63-31276
	653	63-31192
	660	63-31225
Air	608	63-31304
	695	63-14544
Air conditioning equipment	676	63-31303
Aircraft	658	63-19434
Albedo	705	63-15490
Albumins	648	63-16474
	672	63-14947
Alcoholates	641	63-10952
Alcohols	634	63-14151
	644	63-14118
	645	63-14595
	662	63-14821
Aldehydes	638	63-18024
	642	ATS-95Q69J
		SA Code-P-141
Aldomet	620	63-10924
Aleuronic cells	607	63-14790
Algae	599	63-31200
	608	63-11660
		63-19331
	671	63-31370
Algorithms	692	63-10153
		63-10154
		63-10155
	715	63-31161
Aliphatic compounds	662	63-14821
Alkali metal alloys	704	63-14819
Alkali metal compounds	639	63-14523
	648	63-14464
	651	63-19558
Alkali metals	695	63-14209
	704	63-16157
	711	63-11661
Alkaline cells	664	63-16326
Alkaloids	606	63-14613
	620	63-31215
Alkanes	644	63-14145
		ATS-67Q69R
Alkoxytryptamine	626	AEC-tr-5428
Alkyl radicals	642	62-18037
	646	63-14750
Allergy	621	63-10919
Alpine	608	63-31237
Alternating currents	610	63-10506
Aluminum	635	63-19144
	673	63-19022
	685	TTIS NS-106
	695	63-16845
	696	SA Code-P-159
	704	63-31345
Aluminum alloys	703	ATS-60Q69R
Aluminum compounds	646	63-10981
	661	SA Code-P-152
	671	63-15954
	681	63-11658
	688	SA Code-P-121
	690	63-14203
		63-14208
	712	63-19187
Aluminum electrodes	667	63-18087
Alunite	703	63-31217
Amides	641	63-14348
Amines	633	63-31158
	635	AEC-tr-4840
	641	63-14809
	643	63-14808
		63-14840
		ATS-58Q70R
		SA Code-P-114
	645	63-14595
	649	63-14709
		63-15246
	689	SA Code-P-117
Amino acids	604	63-19011
	606	63-14564
		63-14613
		AEC-tr-4903
	633	63-31158
	638	63-18024
Aminobenzophenones	689	SA Code-P-117
Ammodytidae	630	63-31306
Ammonia	647	63-18044
	649	63-14709
	650	63-14130
	662	63-16398
	663	63-14245
Ammonium picrate	638	K-H-3517-a
Ammonium radicals	647	63-18044
		63-18045
	651	63-19256
	652	63-14607
Amylopectin	643	63-14965
Amylose	643	63-14965
Anabiosis	601	63-31184
Analgesics and antipyretics	618	63-15999
Analog systems	693	63-15907
Analysis of variance	710	62-11403
Anatomy	631	NRCC C-4446
	632	61-11435
Androgens	623	63-10932
Anesthesia	613	63-14770
Anesthetics	622	63-15993
Angara River	699	63-31301
Angiography	613	63-14770
	621	63-10919
Animals	601	63-31277
	630	63-31306
Anionite AV-17	610	63-31279
Anodes (Electrolytic cell)	696	SA Code-P-159
Anomalies	617	63-23665
	628	AEC-tr-5553
Anoxia	618	63-15999
Antennas	668	63-14406
Anthracenes	641	ATS-07Q70R
	647	63-14513
Anthrax	610	63-31319
Antibiotics	611	63-19363
	620	63-31215
	621	63-16510
	624	63-16542
	663	SA Code-P-155
	672	63-31358
Antiferromagnetism	710	63-14453
Antigen-antibody reaction	616	63-14800
		63-14850
		63-14851
	626	AEC-tr-5430
	628	63-31214
Antigens and antibodies	609	63-31308
	610	63-31044
		63-31279
		63-31319
	611	63-31062
	614	63-13015
		63-19009
Antimissile defense systems	670	63-31244
Antimissile missiles	670	63-31244
Antimonides	713	63-14454
Antimony	713	63-14465
Antioxidants	681	63-16316
Apatite	600	63-14640
Applied mathematics	692	63-19159
Aquatic animals	603	63-31087
Arachnids	612	62-11763/2
	633	63-31158
Arc welding	666	63-31258
Argon	649	63-14709
Armin	620	63-31250
Arms	629	63-31268
Arsenic	650	ATS-02Q68P
Artificial intelligence	714	63-31172
Artificial leather	659	63-31223
Aryl phosphonates	645	ATS-85Q68R
Ascorbic acid	604	63-31198
Asia	653	63-31124
Asphaltenes	650	63-18054
Asthma	633	63-31158
Astronautics	670	63-19520
Astronauts	601	63-31243
Atherosclerosis	622	63-14395
Atmosphere	608	63-31304
Atmospheric motion	653	63-19850
Atmospheric refraction	670	63-11651
Atomic spectroscopy	711	BISI-3247
Atoms	705	63-15490
Atropine	623	63-23012
Attitudes	600	63-31146
Auger electrons	706	NRCC C-4464
Auger showers	706	NRCC C-4464
Austenite	697	EURAEC-343
Automation	659	63-31173
	668	63-31066
	695	BISI-3225
Automotive industry	679	63-31182
		63-31254
	680	63-31143
Autonomic agents	620	63-31250
Autonomic nervous systems	603	63-19020
		63-19023
	626	AEC-tr-5428
Avalanches	714	63-31210
Awards	715	63-31249
Axially symmetric flow	694	63-19479
Azides	645	63-14084
Bacteria	605	63-14550
	609	63-31357
	611	63-19363
		UCRL Trans-870

Subject	Page	Number
Bacteria (con.)	657	NRCC C-4448
	682	63-19577
Bakery products	673	63-14941
Balances	678	63-31363
Ball mills	661	SA Code-P-152
Barbiturates	620	63-16306
Barges	680	63-19487
Barite	656	63-16180
Barium alloys	702	63-10969
Barium compounds	599	SA Code-P-118
	656	63-16180
Bathtubs	700	63-31369
Bathyscaphe	657	63-31018
Batteries and components	664	63-16326
Bayer 1440	620	63-10924
Bead polymerization	690	SA Code-P-112
Benzene derivatives	644	63-18430
Benzenes	636	63-16573
	644	63-14118
		63-16184
		63-16185
	645	63-14084
	646	63-14750
	649	63-14847
	650	63-18010
	670	AEC-tr-5528
Benzopyrenes	624	63-14387
	636	63-16573
Beryllium compounds	681	63-11658
Beta particles	691	NRCC C-4456
Betaine compounds	606	63-14613
	645	63-14595
	646	63-14602
Bicarbonates	657	63-14101
Bicycles	679	63-31254
Biliary system	615	62-23688
Binders	639	63-14940
	681	63-16137
Biocenosis	630	63-31306
	671	63-31370
Biochemistry	601	63-31277
	605	63-23428-(118-141)
	608	63-11660
	633	63-31158
Bioelectronics	602	63-31256
	609	62-23459
Biographies	601	63-31168
Biological products	607	NRCC C-4459
Biology	601	63-31127
		63-31157
		63-31277
		63-31326
	610	63-31153
	630	63-31306
Bionics	714	63-31055
Biosynthesis	610	63-10506
Birds	616	63-14800
		63-14850
		63-14851
	617	63-14832
		63-14852
	630	63-31306
Birefringence	605	63-15994
Bismuth	700	BISI-3309
Bites and stings	612	62-11763/2
Bitumens	650	63-18054
	657	62-16639
Black locust	608	60-21635
Blackbody radiation	708	63-14657
Blast furnaces	694	BISI-3035
	695	BISI-3022
		BISI-3171
		BISI-3250
		BISI-3285
	696	BISI-3023
		BISI-3168
Bleaching agents	661	ATS-95P61R
Blood	602	63-31355
	625	62-24312
Blood circulation	604	63-15667
	614	63-23017
	621	63-16590
Blood counts	603	63-19004
Blood plasma	603	63-19004
Blood transfusions	602	63-31346
		63-31355
Body fluids	626	AEC-tr-5430
Body temperature	625	62-24312
		62-24313
Boilers	699	63-31289
Boiling water reactors	706	EURAEC-276
Bone	613	63-15986
	629	63-31241
		63-31245
Bone marrow	602	63-31346
		63-31355
Borines	643	63-16027
Boring	658	ATS-51Q68R
Boron	637	BISI-3281
	638	63-16378
Boron alloys	705	BISI-3240
Boron compounds	637	63-15504
Boundary layer	713	63-19312
Boundary problems	692	63-19159
Brachial plexus	629	63-31268
Brain	603	63-19020
	604	63-15667
	613	63-14770
	626	AEC-tr-5428
Bridges	664	63-16468
	670	63-23152
Bromides	638	K-H-3517-a
Bubbles	695	63-14544
Bubnov-Galerkin method	693	62-11638
Bulldozers	674	63-31264
		63-31293
Burns	612	63-31356
	629	63-31245
		63-31248
Butadienes	642	63-18417
	690	SA Code-P-153
Butanes	642	63-18417
Butanols	638	63-18024
	647	63-18413
Butenes	642	63-18417
	681	SA Code-P-167
		SA Code-P-170
	690	SA Code-P-153
Butyl radicals	640	63-15473
	644	63-16184
Cadmium compounds	599	SA Code-P-118
	688	SA Code-P-120
		SA Code-P-121
	689	SA Code-P-168
Calcite	656	63-16241
Calcium	639	63-16175
	658	63-10970
Calcium alloys	696	BISI-3152
	702	63-10969
Calcium compounds	599	63-14570
	600	63-14640
	647	63-14513
	681	63-11658
	701	63-16232
	712	ATS-73Q69J
Calorimetry	662	63-14831
Cameras	677	63-31337
	715	63-31113
Cancer	612	62-11763/4
	613	63-15986
		63-16575
		63-16585
	614	63-13015
	618	63-16586
	619	62-23490
		63-19024
	622	63-16527
	629	63-31241
Capacitors	679	63-19492
Caprolactam	642	ATS-55Q69R
	659	63-31216
	660	63-31225
Capron	660	63-31225
Carbamic acid	599	SA Code-P-118
Carbide tools	696	BISI-3152
Carbides	704	63-16157
	706	EURAEC-361
		EURAEC-362
Carbohydrates	645	63-16380
	674	63-16377
Carbon	695	BISI-3283
	696	63-23210
Carbon alloys	705	BISI-3240
Carbon black	624	63-14387
	649	63-14709
	659	63-31177
Carbon compounds	621	63-23024
	636	63-16572
	643	63-14840
Carbon dioxide	702	BISI-3198
Carbonates	645	TTIS NS-83
	651	63-19558
	655	63-16265
	657	63-14101
	663	63-14245
Carbonic acids	690	63-14202
	705	63-14078
Carbonyl radicals	645	63-14084
Carboxylases	605	63-14550
Carboxylic acids	684	SA Code-P-156
Carcinogenic agents	614	63-13015
	619	63-19024
	624	63-14387
Cargo vehicles	679	63-31209
		63-31254
Carp	630	63-31085
Carzinophilin	622	63-16527
Casein	604	63-19011
Castigliano's principle	693	63-10252
Castings	701	BISI-3267
		BISI-3286
Catalysts	639	63-16411
	646	ATS-65Q67R
	658	ATS-02Q68P
	661	SA Code-P-152
	689	SA Code-P-158
		SA Code-P-168
Cathode ray tubes	676	63-31238
Cathodes	667	63-18087
Cathodes(Electrolytic cell)	703	63-14814
Cats	602	63-31256
	616	63-16428
Cattle	623	63-14409
Cellosolve	642	63-18417
Cells (Biology)	603	63-31087
	616	63-23029
	619	63-19024
	626	AEC-tr-5428
	628	63-31214
Cellulose	634	63-14151
	635	63-14371
	645	63-16380
Cellulose acetates	648	63-16474
Cellulose chemistry	634	63-14219
		63-14220
		63-14221
	635	63-14248
Cements	681	63-11658
		63-16137
Ceramic materials	681	63-11658
	696	63-16840
Cereals	607	63-14790
	633	63-31158
	672	63-14775
Cerebral cortex	611	63-31188
	617	63-23027
	623	62-24318
	628	AEC-tr-5553
Cermets	681	63-11658
Cesium compounds	651	63-16871
Charged particles	705	UCRL Trans-819 (L)
Charges	695	BISI-3285
Charges (Explosives)	658	63-31205
Chelate compounds	620	63-16345
	622	63-14721
	624	63-16346
	711	63-14232
Chemical analysis	633	63-15758
	650	ATS-73Q70F
Chemical bonds	606	63-16723
	711	63-14232
Chemical engineering	658	63-31155
	659	63-31173
		63-31177
		63-31216
		63-31223
	660	63-31225
		63-31253
		63-31262
	663	63-31112
	694	63-19435
Chemical equilibrium	640	63-14609
	647	63-18413
	652	63-14607
Chemical industry	658	63-31155
	659	63-31173
		63-31177
		63-31216
		63-31223
	660	63-31225
		63-31253
	661	63-14240
		63-14241
		63-14242
	663	63-31112
	674	63-31264
Chemistry	633	63-15758
Children	613	63-15986
China	607	63-31137
	608	63-31237

Subject	Page	Number
China (con.)	633	63-15758
	652	63-31191
	653	63-31183
		63-31192
		63-31208
	654	63-31048
		63-31126
		63-31257
	694	63-31123
	714	63-31194
Ching Po Autonomous Chou	653	63-31192
Chlorides	639	63-14526
	642	62-18037
	644	63-14118
		63-14145
		63-16185
	645	ATS-47Q69R
	646	63-10981
	649	63-14516
	651	63-16871
	704	63-19036
Chlorination	644	63-14145
	663	63-14028
	671	63-14366
Chlorine	642	63-14123
	661	63-14240
		63-14241
		63-14242
	695	63-14209
1-Chloro-2, 4-dinitrobenzene	638	63-14244
Chloroacetic acids	662	63-16441
Chlorohydrine	663	63-14028
Chloromethylation reactions	644	63-16185
Chlorophylls	606	63-16723
		63-16724
	611	UCRL Trans-870
Chlorothanol	646	63-14136
Chlorpromazine	603	63-19020
	621	62-24332
	622	62-24315
		62-24334
	623	62-24318
		62-24330
	624	62-24321
	625	62-24312
		62-24313
Cholesterol	626	AEC-tr-5428
Cholinesterase	612	63-31356
Cholinesterase inhibitors	620	63-31250
	633	63-31158
Chromates	634	63-14385
Chromatographic analysis	672	63-19021
Chromium	704	63-19036
	705	BISI-3223
Chromium compounds	634	63-14385
	645	63-14084
	658	63-31155
	659	63-31223
	704	63-19036
Chromosomes	606	63-15668
Cigarettes	613	63-16575
		63-16585
	618	63-16586
	637	63-14394
Circuit breakers	664	63-31097
	667	63-31335
Circuits	667	63-31050
Clavicle	629	63-31268
Climatology	653	63-31139
	670	63-23152
Clinical death	601	63-31184
Clocks	676	63-31303
	677	63-31317
	678	63-31348
		63-31363
Closed-cycle ecological systems	602	63-31167
Clostridium	623	63-10947
Clostridium perfringens	606	63-15983
Clostridium tetani	610	63-31323
Clothing	684	63-15973
Clupeidae	631	NRCC C-4455
	632	61-11435
CNS depressants	621	62-24332
	623	62-24330
Coacervation	607	UCRL Trans-696
Coal	695	BISI-3171
Coal mines	652	63-31191
Coatings	660	63-31262
	673	63-14941
Cobalt catalysts	641	63-16430
	642	SA Code-P-141
	643	SA Code-P-114
Cobalt compounds	681	63-16316
	713	63-14444
Cocoa	672	63-14944
		63-14947
Cod	631	63-15207
Coding	715	62-16968
Coke	659	63-31216
	695	BISI-3171
		BISI-3285
Cold cathode tubes	677	63-31337
Cold working	678	BISI-3206
Colimycin	621	63-16510
	624	63-16542
Colloids	607	UCRL Trans-696
	648	63-16474
Colorimetric analysis	638	63-14244
	685	TTIS NS-106
Colorimetry	635	63-19144
Colors	600	63-31199
Combustion	650	63-14130
	651	63-19256
	682	63-10212
	701	BISI-3267
Commerce	597	63-31259
	669	63-31181
Communicable diseases	613	63-19016
Communication systems	658	ATS-51Q68R
	667	63-31050
Communication theory	667	63-31050
Communism	714	63-31210
Complex compounds	620	63-16345
	622	63-14721
	624	63-16346
	634	63-14463
	635	63-19144
	637	63-14446
Complexometric analysis	637	63-14446
Compressors casting	667	63-31330
Computer storage devices	692	63-19159
Computers	664	63-31082
	667	63-31050
	676	63-31203
		63-31303
	677	63-31317
	693	63-15907
	708	63-31038
		63-31212
Concrete	664	63-14739
Condensation reactions	683	63-14087
Condiments	674	63-14650
Conditioned reflex	623	62-24318
	628	63-31095
Conferences	655	63-16265
	664	63-31255
	668	63-31066
	700	63-31369
	705	63-14817
	714	63-31210
Congress of the CPSU (no. 22)	715	63-31239
Construction	659	63-31173
	660	63-31225
	664	63-31082
	674	63-31264
		63-31293
	675	63-31338
Construction materials industry	658	63-31155
Containers	670	63-23152
	674	63-14777
	688	63-14791
Control systems	668	63-31103
Conveyors	597	63-31259
Convulsive disorders	614	63-23015
Cooling and ventilation equipment	666	63-31196
Copolymerization	646	ATS-18Q70H
	690	SA Code-P-153
Copper	659	63-31223
Copper catalysts	662	63-16398
Copper compounds	599	SA Code-P-118
	650	ATS-02Q68P
Cordage	683	63-15265
Corrosion	600	63-14030
Corrosion inhibition	685	63-16831
Corrosive gases	705	63-14078
Corticosteroid agents	620	63-10491
Corundum	682	63-11656
	699	63-31289
Cotton	633	63-31158
	634	63-14220
		63-14221
Cotton textiles	684	63-15973
Countercurrent extraction	662	63-14821
Crazing	700	BISI-3276
Crucibles	681	63-11658
	682	63-11656
Cryoscopy	650	63-18010
Crystal holders	711	62-16597
Crystal lattices	710	63-14453
Crystal structure	633	63-15758
	638	63-14746
	712	63-14456
		63-16745
Crystallization	647	63-14513
Crystals	639	63-14527
	712	ATS-73Q69J
	713	63-18001
Cumenes	644	63-16184
		63-16185
Curcumin	638	63-16378
Current regulators	668	62-18912
Curvature of spine	629	63-31268
Cutting tools	675	63-31232
	691	ATS-44Q69FN
	700	BISI-3276
	703	ATS-60Q69R
Cyanogen	638	K-H-3517-a
Cybernetics	708	63-31038
		63-31212
	714	63-31055
	715	63-31242
	717	63-31094
Cycloalkanes	606	63-16724
Cyclohexane derivatives	641	63-14310
Cyclohexanes	661	SA Code-P-151
Cyclohexanols	641	63-14809
	661	SA Code-P-151
Cyclones (Mechanical)	674	63-16377
Cyprinidae	630	63-31218
	632	NRCC C-4466
Cysteine	606	63-16724
Czechoslovakia	652	63-31151
	708	63-31152
Dead-stop titration	637	63-14082
Decarburization	701	BISI-3229
Declomycin	624	63-10518
Deficiency diseases	619	63-15989
Deformation	669	63-19183
	693	63-10252
		63-19488
Dehydrated foods	672	63-14987
	674	63-14934
Dehydration	599	63-10848
	672	63-14985
Deoxidation	697	BISI-2998
Deserts	653	63-31183
		63-31192
Desferroxamine	620	63-16345
	622	63-14721
Desiccants	672	63-14944
Detonators	658	63-31205
Dextran	626	AEC-tr-5428
Dialkylbarbituric acids	620	63-16306
Diamonds	658	63-31155
	704	63-31109
Dianabol	623	63-10932
Diaphragm	618	63-15985
Dibasol	613	63-19006
β,β', -dichlorodiethyl-ether	646	63-14136
1, 2-dichloroethane	663	63-14028
Dichloroethanes	642	63-14123
2, 4-D(2, 4-Dichloro-phenoxyactic acid)	600	63-14030
Dielectrics	712	63-19187
Diencephalic syndrome	614	63-23015
Dienes	642	62-16400
	690	SA Code-P-153
Diet	604	63-19011
	673	63-15988
		63-19022
Diethyl ethers	646	63-14136
Differential equations	692	62-32626
Diffraction analysis	711	ATS-88Q68J
Diffusion	712	63-16550
Digital computers	692	63-19159
Dimerization	642	62-16400
Dimethylchlortetracycline	624	63-10518
Dimethylpolysiloxanes	683	63-16324
Dinitrophenetole	671	63-16422
Dioxides	651	63-19558
	685	TTIS NS-103
		TTIS NS-104
		TTIS NS-106
Diphenylthiourea	625	63-10920
Dipole moments	644	63-18430
	650	63-18010

Subject	Page	Number
Diptera	633	63-31158
Directories	714	63-31272
Discharge tubes	710	63-14457
		63-14460
Diseases	615	63-19368
	627	63-31118
Dislocations	629	63-31268
Dissemination	717	63-31076
Dissociation	634	63-14463
Distilling plants	661	63-16037
Distribution	631	NRCC C-4447
bis-Dithiocarbamic acid derivatives	599	SA Code-P-118
Documentation	717	63-31076
Dogs	614	63-15997
Dolomite	656	63-16241
		63-16545
		63-16551
	657	62-16639
	681	63-16137
Domains (Crystallography)	713	63-18001
Dopa	620	63-10924
Doppler effect	670	63-11651
Dosimeters	626	AEC-tr-5428
DPTA	620	63-16345
Drawing (Machine processing)	683	63-18021
Drills	666	63-31240
	675	63-31338
	678	62-16439
Drugs	620	63-31215
	625	63-23023
	659	63-31173
Dyes	606	63-16724
	684	SA Code-P-119
	686	63-16450
		62-20411
Early warning systems	670	63-31244
Earth handling equipment	674	63-31293
East Germany	708	63-31156
		63-31229
Echinulin	607	NRCC C-4459
Ecology	630	63-31306
	632	NRCC C-4458
	671	63-31370
Economic geology	655	63-16181
		63-16182
		63-31206
	656	63-16179
		63-16180
		63-16551
Economics	658	63-31155
	660	63-31253
	661	63-14240
		63-14241
		63-14242
	714	63-21415
	715	63-31242
	716	63-21601
		63-31144
		63-31265
		63-31302
		63-31312
	717	63-31094
		63-31318
		63-31322
Education	601	63-31189
	654	63-31257
	659	63-31173
	714	63-31210
Elastic shells	693	63-10252
Elastomers	640	63-31187
	690	SA Code-P-153
	691	63-23376
Electric cables	666	63-31240
	676	63-31303
Electric currents	631	NRCC C-4455
	648	63-14464
	712	63-16550
Electric discharges	679	63-19492
	709	62-18257
Electric furnaces	666	63-31196
	674	63-31293
	677	63-31337
Electric igniters	679	63-19492
Electric insulation	666	63-31196
	667	63-31330
	669	63-31234
	682	63-11656
	685	TTIS NS-108
Electric motors	665	63-31141
		63-31171
	666	63-31240
	669	63-31234
Electric potential	635	EURAEC-364
Electric power production	666	63-31196
Electric propulsion	679	63-19408
Electric relays	665	63-31141
	677	63-31317
Electric switches	667	63-31335
	677	63-31317
Electrical conductance	709	NRCC C-4457
Electrical corona	709	NRCC C-4457
Electrical double layer	651	ATS-88Q69J
Electrical equipment	665	63-31141
		63-31171
	666	63-31176
		63-31196
		63-31240
		63-31258
	667	63-31330
		63-31335
	677	63-31317
Electrical impedance	709	62-16683
Electrical networks	709	63-31092
Electrocardiography	615	63-23009
	623	63-23012
Electrochemistry	635	EURAEC-364
	636	63-16158
	647	63-18044
	650	ATS-73Q70F
	704	63-19036
Electrodeposition	649	63-15246
Electrodes	635	EURAEC-364
Electroencephalography	617	63-23665
	628	AEC-tr-5553
Electrolysis	648	63-18418
	649	63-15246
	704	63-19036
Electrolytic cells	658	63-10970
	682	63-10961
	696	SA Code-P-159
	705	63-14817
Electron beams	694	BISI-3192
Electron microscopes	676	63-31238
Electron microscopy	617	63-23027
	626	AEC-tr-5428
Electronic equipment	609	62-23459
Electronic flashes	668	62-18912
Electronics	658	63-31329
	664	63-31162
	667	63-31050
Electrons	644	63-18430
	706	NRCC C-4464
Electrophoresis	610	63-10505
	614	63-23017
Electrophotography	686	62-20374
		62-20411
		62-20417
	687	ATS-94Q69J
Embryos	618	63-19003
	628	AEC-tr-5553
Encephalitis	616	63-16428
Energy Conversion	679	63-19408
Engineering	658	63-31329
	664	63-31162
	667	63-31050
Engineering personnel	601	63-31189
	715	63-31249
Entomophages	600	61-23712
Entrainment	651	63-16871
Enzymes	607	UCRL Trans-696
Epidemiology	609	63-31357
	616	63-14850
		63-14851
	617	63-14852
Epilepsy	626	AEC-tr-5428
Epinephrine	603	63-19020
	623	62-24318
Epsom salts	639	63-14527
Erythrocytes	603	63-19004
	626	AEC-tr-5430
Escherichia	626	AEC-tr-5428
Esters	605	63-14768
Estrogens	623	63-10932
Ethanes	646	63-10981
	651	63-16041
	663	63-14028
Ethanols	635	63-14248
	646	63-14136
Etherless medium	647	ATS-11Q70R
Ethers	690	63-14208
Ethyl chloride	646	63-10981
Ethyl radicals	683	63-14293
Ethylene chlorohydrin	649	63-16036
Ethylene derivatives	663	63-14028
Ethylene oxide	663	63-14028
Ethyleneamines	633	63-31158
	643	SA Code-P-114
Ethylenebisdithio carbamate	636	63-16572
Ethylenes	599	SA Code-P-118
	642	63-14123
	643	ATS-13Q67R
	645	ATS-47Q69R
	646	63-10981
		ATS-65Q67R
	649	63-16036
	689	SA Code-P-158
Evolution	606	AEC-tr-4903
	608	63-11660
Excavators	674	63-31264
		63-31293
Expanded plastics	691	63-14040
Exploration	654	ATS-03Q70R
Explosions	650	63-14130
Explosive gases	650	63-14130
Explosive materials	670	AEC-tr-5528
	671	63-16422
Extraterrestrial radio waves	600	63-11647
Fatigue (Mechanics)	664	63-16468
	680	BISI-3238
Fats	599	63-10848
	661	63-14936
Favism	612	62-11763/2
Feeding	632	NRCC C-4466
Femur	629	63-31241
Fenchel theorem	692	63-31165
Fermentation	599	63-16617
Ferrites	681	63-16316
	696	63-23210
	712	63-16745
Ferromagnetic materials	710	63-14453
Ferromagnetism	712	63-16745
	713	63-18001
Fertilizers	599	63-14570
		63-14626
	600	63-14640
	652	63-14607
	658	63-31155
	660	63-31225
Fetal membranes	629	63-31248
Fibers	683	63-16012
	684	63-15307
		63-16978
	691	63-14418
Fibers (Synthetic)	659	63-31173
		63-31223
	660	63-31225
	683	63-15265
		63-16324
		63-18021
	684	ATS-79Q69J
		SA Code-P-119
		SA Code-P-156
		TTIS NS-90
	685	ATS-80Q69J
Fibrin	610	63-10505
Fillers	664	ATS-35Q70G
Films	685	TTIS NS-107
		TTIS NS-108
Filters (Electromagnetic wave)	668	63-18084
Fingers	600	63-31199
Fire extinguishers	671	63-19649
Fire-resistant textiles	671	63-19649
Fisheries	630	63-31089
	631	NRCC C-4455
Fishes	602	63-31213
	630	63-31056
		63-31085
		63-31218
		NRCC C-4439
	631	61-31036
		63-15207
		63-31207
		NRCC C-4443
		NRCC C-4446
		NRCC C-4447
		NRCC C-4450
		NRCC C-4451
		NRCC C-4455
	632	61-11435
		62-25064
		63-15208
		63-15209
		63-19148
		NRCC C-4458
		NRCC C-4460
		NRCC C-4466

Subject	Page	Number
Fission products	635	AEC-tr-4840
	706	EURAEC-360
Flames	711	BISI-3247
Flotation	599	63-14626
	663	63-14597
Flotation (Separation)	649	63-14516
	695	63-14544
Flour	673	63-14960
Fluid dynamic properties	643	63-14965
Fluorescence	609	63-31308
	610	63-31044
		63-31279
		63-31319
		63-31323
	611	63-31062
	676	63-31224
Fluorides	671	63-15954
	707	EURAEC-24
Fluorocarbons	691	63-23376
Fluorochrome	610	63-31279
Fluorspar	656	63-16551
Foams	663	SA Code-P-155
Food	599	63-10848
	612	63-19002
	673	63-14977
Forcheim method	638	K-H-3517-a
Forestry	601	63-31277
	607	63-31137
	608	63-31237
	714	63-31210
Forging	701	BISI-3182
Formaldehyde	642	63-14705
	650	63-15456
Formamides	643	63-14840
Fouling	671	63-31370
Fractionation	661	63-16037
Fracture (Mechanics)	700	62-24149
Fractures (Bone)	629	63-31241
		63-31245
		63-31268
Free radicals	645	63-16380
		ATS-47Q69R
Freeze drying	650	63-14792
Freezing	602	63-31346
		63-31355
French to Russian (Machine translation)	715	63-31022
Freon-12	682	63-19216
Frequency multipliers	670	63-11651
Friction	651	62-16454
Fructoglucosan	645	63-16380
Fruits	608	63-19150
Fuel additives	682	63-10961
Fuel oil	682	63-19216
	683	63-14823
Fuel pumps	597	63-31226
Fuels	660	63-31225
Fumaric acid	646	ATS-18Q70H
Fungi	607	NRCC C-4459
Fungicides	599	SA Code-P-118
Funtumia	620	63-10491
Furan	659	63-31216
Furan derivatives	612	62-11763/4
	644	63-18430
Furnaces	662	63-14831
	681	63-11658
	694	BISI-3192
Fused materials	695	63-16845
	696	63-19921
Gallium alloys	663	63-11657
Gallium compounds	634	63-14463
Gamma ray spectra	705	UCRL Trans-819(L)
Ganglia	602	63-31256
	603	63-19023
Gas analysis	695	BISI-3291
Gas chromatography	636	63-16573
	637	63-14394
	638	63-18024
Gas diffusion	706	EURAEC-360
Gas discharges	710	63-14457
		63-14460
Gas flow	695	BISI-3285
	713	63-19312
Gas turbines	669	63-31263
Gases	650	ATS-73Q70F
	691	63-14418
	696	BISI-3022
		BISI-3023
	703	ATS-60Q69R
Gasoline	683	63-14087
Gastritis	612	63-19002
Gastrointestinal system	603	63-19025
	611	63-31062
	612	63-19002
	673	63-15988
Gazetteer	654	63-31048
		63-31126
Gears	678	ATS-22P60P
Gelatin	687	63-18072
Gems (Minerals)	704	63-31109
Generators	665	63-31141
	666	63-31258
	667	63-31335
Genetics	606	AEC-tr-4903
	628	AEC-tr-5553
Geography	653	63-31183
		63-31192
	654	63-31257
Geological survey	654	63-31048
		63-31126
Geology	654	63-31134
Geometric forms	696	63-19921
Geomorphology	653	63-31192
Geophysics	652	63-31151
		63-31349
Germanium compounds	713	63-14444
Germicides	623	63-10947
Glass	682	62-14899
Glass textiles	671	63-19649
Glow discharges	710	63-14457
		63-14460
Gluconic acid	610	63-10506
Glutamic acid	605	63-14550
	606	63-14564
	642	63-14543
	674	63-14650
Glutamine	605	63-14550
Gluten	672	63-14796
Glutin	643	63-14965
Glyceral	645	ATS-86Q68R
Glycerol ethers	622	63-15993
Glyceryl guiacol ether	622	63-15993
Glycines	645	63-14595
	646	63-14602
Glycolic acids	610	63-10506
	691	63-14810
Glycols	646	ATS-18Q70H
	663	63-14028
Glycoside hydrolases	607	UCRL Trans-696
Grain structures (Metallurgy)	647	63-16258
	697	63-16825
Granulation	639	63-14940
Grasses	599	63-10848
	611	63-19363
Gravity anomalies	652	ATS-83Q69R
Grinders	661	SA Code-P-152
Ground support equipment	670	63-23152
Guanethidine	624	63-23021
Guanidines	642	62-18037
Guanyl-o-alkylisoureas	642	62-18037
Guidance	670	63-19174
Guided missiles	670	63-19174
		63-31244
Gulf of Alaska	631	NRCC C-4451
Gypsum	712	ATS-64Q69J
		ATS-73Q69J
Gyro compasses	667	63-31050
Gyroscopes	693	62-18919
Half-hard steel	701	BISI-3182
Halides	648	63-14464
Halocarbon plastics	691	63-23376
Halogens	640	63-31187
Halohydrins	649	63-16036
Head	604	63-15667
Health resorts	608	63-31304
	615	63-31274
Heart	617	63-23665
Heat	614	63-23017
Heat resistant metals and alloys	704	63-31345
Heat resistant plastics	691	63-14040
		63-23376
Heat tolerance	604	63-31198
Heat transfer	694	63-19435
	706	EURAEC-276
Heaters	662	63-16398
Helium group gases	673	63-14945
	706	EURAEC-360
		EURAEC-362
	710	63-14457
		63-14460
Hematology	602	63-31346
		63-31355
	615	63-23009
	625	63-23023
Hemicellulose	645	63-16380
Hemiptera	633	63-31158
Hemochromatosis	620	63-16345
	622	63-14721
	624	63-16346
Hemoglobin	626	AEC-tr-5430
Hemopoietic system	626	AEC-tr-5428
Hepatitis (Nonviral)	616	63-15987
Herbicides	600	63-14030
Hernia	618	63-15985
Hexadienes	690	SA Code-P-153
Hexanicotinic acid ester	605	63-14768
Hexoses	638	63-14222
Hibernation	601	63-31184
High temperature research	697	EURAEC-342
Histological techniques	616	63-23029
Histology	603	63-19025
Hoerde steelworks	702	BISI-3209
Hoists	674	63-31293
	675	63-31338
	679	63-31182
Holarrhena	620	63-10491
Hormones	616	63-19026
	620	63-10491
		63-31215
Hungary	652	63-31349
Hydra	603	63-31087
Hydrates	712	ATS-73Q69J
Hydraulic research	693	63-19488
Hydrazine derivatives	641	63-14809
Hydrocarbons	644	63-14145
	649	63-14709
	663	63-11657
	682	63-19216
		63-19577
Hydrochloric acid	600	63-14640
	695	63-14209
Hydrocyanic acids	662	63-16398
Hydrodrills	678	62-16439
Hydrodynamics	662	63-14023
	694	63-19435
Hydroelectric power systems	630	63-31085
	664	63-31097
	666	63-31240
Hydrogen	634	63-14151
	648	63-11659
	649	63-14847
	650	63-15456
	702	63-16863
Hydrogen compounds	636	63-16572
	646	63-10981
Hydrogenation	661	63-14936
Hydrology	652	63-31267
Hydroquinone	646	63-14750
Hydroxamic acids	641	63-14348
Hydroxides	650	ATS-02Q68P
Hygrometers	676	63-31224
Hypercapnia	604	63-15992
Hypersonic planes	658	63-19434
Hypertension	619	63-19015
	620	63-10924
	624	63-23021
Hypnotics and sedatives	618	63-15999
	622	63-15993
Hypothalamus	603	63-19020
Hypothermia	628	63-31211
Hypoxia	604	63-15992
Ignition systems	679	63-19492
Imines	633	63-31158
Immunity	619	62-23490
Immunology	609	63-31357
	614	63-19009
Impact shock	693	63-19488
Indexes	717	63-11646
Indium alloys	663	63-11657
Indium compounds	713	63-14454
Induction motors	665	63-31171
Industrial equipment	671	63-15954
	675	63-31169
		63-31232
Industrial medicine	624	63-14387
Industrial plants	660	63-31253
	669	63-31181
Industrial production	597	63-31231
		63-31226
	598	63-31275
		63-31276
		63-31287
		63-31296
	658	63-31155
	659	63-31173
		63-31177
		63-31216
		63-31223
	660	63-31225
		63-31253
		63-31262

Subject	Page	Number
Industrial production (con.)	663	63-31112
	665	63-31171
	666	63-31176
		63-31196
		63-31240
		63-31258
	667	63-31330
		63-31335
	669	63-31181
		63-31233
		63-31234
		63-31263
	674	63-31264
		63-31293
	675	63-31169
		63-31232
		63-31288
	676	63-31203
		63-31224
		63-31238
		63-31297
		63-31303
	677	63-31317
		63-31324
		63-31337
	678	63-31348
		63-31363
	679	63-31182
		63-31209
		63-31254
	680	62-24225
		63-31143
	688	63-31061
	694	63-31343
	697	63-21525
	698	63-31180
		63-31221
		63-31266
	699	63-31289
		63-31301
		63-31347
	700	63-31360
		63-31369
	703	63-31083
		63-31217
		63-31294
	704	63-31345
	715	63-31113
	716	63-21601
		63-31144
		63-31265
		63-31302
		63-31312
	717	63-31318
		63-31322
Industrial relations	675	63-31338
Industrial research	717	63-11646
Infants	618	63-15985
Infections	624	63-16542
Inflammation	599	63-19018
Influenza viruses	609	63-31308
Information retrieval	717	63-31076
Infrared equipment	677	63-31317
Infrared films	686	ATS-29Q69J
Infrared photography	686	ATS-29Q69J
Inhalation immunization	609	63-31357
Insecticides	600	61-23712
	633	63-31158
Insects	633	63-31158
Instruction manuals	692	63-14556
Instructors	715	63-31249
Insulating materials	664	ATS-35Q70G
	702	BISI-3195
Internal combustion engines	669	63-31234
	679	63-31182
Intestines	633	63-31158
Ion bombardment	705	UCRL Trans-819 (L)
Ion exchange resins	610	63-31279
	662	63-14023
Ions	648	63-14464
	705	UCRL Trans-819 (L)
Iron	695	63-16845
	698	63-31221
	701	63-16232
	702	62-18687
		BISI-3198
	705	63-14078
Iron alloys	699	63-31289
	701	BISI-3267
		BISI-3286
	705	BISI-3223
Iron compounds	599	SA Code-P-118
	620	63-16345
	622	63-14721
	624	63-16346
	638	63-14746
	639	63-14526
	713	63-14444
Iron industry	696	BISI-3212
	711	BISI-3247
Isobutanol-xylenes	647	63-18413
Isoprene	690	SA Code-P-153
Jet engine fuels	682	63-19577
Jet engines	679	63-19408
Jet propulsion	679	63-19408
Joints (Physiology)	629	63-31241
Junction boxes	664	63-31097
Kamchtka	632	62-25064
Katex FN	662	63-14023
Kazakhstan	655	63-19586
Kerr effect	713	63-18001
17, Ketosteroids	619	63-19015
Kola Peninsula	630	NRCC C-4439
Krypton	649	63-14709
Kurila Islands	632	62-25064
Labor	600	63-31146
	660	63-31225
Laboratory equipment	647	63-18413
	671	63-16422
	691	63-14397
Laboratory furnaces	667	63-31330
	677	63-31317
Lactams	642	ATS-55Q69R
Ladle	702	63-31120
Lakes	657	NRCC C-4448
Langbeinite	662	63-16103
		63-16104
	663	63-16109
Language	714	63-31145
	715	63-31022
		63-31161
Larynx	613	63-19016
Lasers	667	63-31050
Latrodectism	612	62-11763/2
Launching sites	670	63-23152
Lead	695	63-14209
Lead alloys	651	63-16041
	703	63-14814
	704	63-14819
Lead compounds	641	63-14310
	682	63-10961
	683	63-14293
Leaves	635	63-14371
Leprosy	625	63-10920
Letter capacity	687	ATS-90Q69J
Leucine	646	63-14598
Leukocytes	602	63-31346
	613	63-19006
	626	AEC-tr-5430
Levulinic acid	638	63-14222
Light	611	UCRL Trans-870
Light water reactors	707	EURAEC-354
Lighting equipment	676	63-31224
		63-31303
	677	63-31317
	678	63-31363
Lignin	646	NRCC C-4462
Limestone	657	62-16639
Linear systems	668	63-31103
Linseed oil	685	TTIS NS-103
Lipids	605	63-14768
	614	63-23015
Lipogranulomatosis	617	63-14885
Lipoproteins	605	63-14768
	614	63-23017
Liquid metals	696	63-19921
		BISI-3216
	697	BISI-2998
Lithium compounds	661	SA Code-P-152
	688	SA Code-P-121
Lithosphere	654	63-31134
Liver	614	63-13015
	615	62-23688
	616	63-23029
	621	63-23024
Liver function tests	616	63-15987
Loading (Mechanics)	693	BGIRA-555
Locati method	680	BISI-3238
Loess soil	652	63-31191
Low pass filters	668	63-18084
Lubricants	633	63-31158
Luminescence	610	63-31319
		63-31323
Lungs	599	63-19018
	613	63-16585
	625	63-23023
	627	63-31118
Lymphatic system	614	63-19009
Machine tools	675	63-31169
		63-31232
		63-31288
Machine translation	714	63-31145
		63-31172
	715	63-31022
		63-31161
	717	63-31076
Machines	598	63-31275
		63-31276
	660	63-31225
		63-31262
	669	63-31181
		63-31233
		63-31234
		63-31263
	674	63-31264
		63-31293
	675	63-31288
		63-31338
	678	BISI-3206
Macromolecules	605	63-15994
Magnesium alloys	651	63-16041
Magnesium compounds	599	SA Code-P-118
	636	63-16158
	639	63-14527
	647	ATS-11Q70R
	662	63-16103
		63-16104
	663	63-16109
	681	63-11658
Magnetic fields	695	BISI-3225
	712	63-16550
	713	63-14465
Magnetic tape	681	63-16316
Magneto-optic effect	709	ATS-10Q70F
	713	63-18001
Magnetometers	697	EURAEC-343
Maintenance vehicles	675	63-31338
Maleic acid	646	ATS-18Q70H
Malting drums	672	63-14775
Mammary glands	604	63-19011
	619	62-23490
Management engineering	664	63-31082
Manganates	639	63-14523
Manganese compounds	712	63-16745
	713	63-14444
Marine biology	602	63-31213
	632	62-25064
	671	63-31370
Marine geology	657	63-31170
Marine geophysics	653	63-31139
Marine meteorology	653	63-31208
Martensite	697	EURAEC-343
Masers	667	63-31050
Mass spectrum	711	ATS-25Q68G
Mass transfer	661	63-14141
Materials	681	63-14778
	686	62-20411
		62-20417
Mathematical models	693	63-15907
Mathematics	692	63-31165
	708	63-31038
		63-31152
		63-31156
		63-31212
		63-31229
		63-31325
Matrix algebra	692	63-10153
Measuring devices (Electrical and electronic)	669	63-19183
Meat	672	63-14947
		63-19021
		63-31358
	674	63-14934
Mechanics	708	63-31038
		63-31212
Medical examination	613	63-15986
Medical research	609	62-23459
Medicine	601	63-31127
		63-31326
	602	63-31335
	612	62-11763/2
		62-11763/4
Melting	713	63-14454
Mercury compounds	689	SA Code-P-168
Mesh screens	687	ATS-34Q70P
Mesityl radicals	644	63-14118
Metabolism	614	63-23015
	626	AEC-tr-5430
	628	63-31367
	632	NRCC C-4458

Subject	Page	Number
Metagermanates	713	63-14444
Metal forming presses	675	63-31169
		63-31288
Metal spinning	678	ATS-22P60P
Metallography	696	BISI-3212
	697	EURAEC-342
Metallurgy	667	63-31050
	694	63-31123
	697	63-21525
	698	63-31180
		63-31221
		63-31266
	699	63-31289
		63-31301
		63-31347
	700	63-31360
		63-31369
	702	63-31120
	703	63-31083
		63-31217
		63-31294
	704	63-31345
Metalorganic compounds	641	63-10952
		63-14310
Metals	637	63-15504
	656	63-16179
	659	63-31177
Meteorological phenomena	653	63-31124
Meteorology	652	63-31267
	653	63-31139
Meters	676	63-31224
Methanes	642	63-14705
		ATS-21Q70R
	644	ATS-67Q69R
	645	63-14084
	648	63-18418
	650	63-15456
	671	63-14366
	711	ATS-25Q68G
Methanols	638	63-18024
	641	63-10952
	649	63-14709
	662	63-14821
Methionine	626	AEC-tr-5430
5-Methoxytryptamines	626	AEC-tr-5428
n-Methyl-α-pyrrolidine carboxylic acid	620	63-31250
Methyl methacrylate	688	SA Code-P-120
		SA Code-P-121
Methyl radicals	644	63-14118
	645	ATS-47Q69R
Methylene sulfide	642	63-14705
Mexico	655	63-16181
		63-16182
	656	63-16178
		63-16179
		63-16180
Mice	617	63-14832
Microminiaturization (Electronics)	676	63-31297
	677	63-31324
Microorganisms	601	63-31277
	609	63-23153-(1-6)
		63-23154-(1-6)
		63-23154-(28/1-30/6)
		63-31357
	610	63-31153
		63-31279
	655	63-31206
Microscopes	697	EURAEC-342
Microscopy	713	63-18001
Microsomes	626	AEC-tr-5428
Microwaves	626	AEC-tr-5428
Milk	604	63-19011
	672	63-14985
		63-14987
Minerals	647	63-16258
	655	63-16181
		63-16215
	656	63-16179
Mining engineering	654	63-16264
	655	63-16181
		63-16265
	658	63-31205
	703	63-31083
Mites	633	63-31158
Mitosis	616	63-23029
Moisture	691	NRCC C-4456
Moistureproofing	683	63-16012
Molecular association	711	63-14232
Molecular isomerism	711	63-14232
Molecular structure	605	63-15994
	607	NRCC C-4459
Molecular structure (con.)	646	63-14598
		NRCC C-4462
Monoxides	643	63-14840
Monsoon winds	653	63-31124
Motorcycles	679	63-31182
Mountains	654	63-31048
		63-31126
Mulberry trees	608	60-21635
Multiple sclerosis	624	63-10905
Muscle relaxants	622	63-15993
Muscles	621	63-16590
	626	AEC-tr-5430
Mutations	602	63-31256
	630	63-31218
Myeloma	613	63-15986
Narcotics	618	63-15999
Natural gas	671	63-14366
	701	BISI-3229
Necrosis	612	62-11763/2
Neoplasms	617	63-14885
	619	63-19024
Nerve cells	603	63-19023
Nervous system	621	63-23024
	628	63-31367
Neuromuscular transmission	609	62-23459
Nibuphin	620	63-31250
Nickel alloys	705	63-14046
		BISI-3223
Nickel catalysts	643	SA Code-P-114
Nickel compounds	710	63-14453
Nickel electrodes	664	63-16326
Nicotine	621	63-16590
	638	K-H-3517-a
Nicotinic acid	605	63-14768
	606	63-14613
Niobium	648	63-11659
Niobium alloys	707	EURAEC-354
Niobium compounds	712	63-14456
Nisin	623	63-10947
Nitrates	649	63-14516
	655	63-16182
Nitric acid	635	AEC-tr-4840
	639	SA Code-P-157
	640	63-15473
Nitriles	643	SA Code-P-114
Nitro radicals	670	AEC-tr-5528
Nitrobenzenes	638	63-14244
Nitrofurantion	612	62-11763/4
Nitrogen	608	63-11660
	648	63-11659
	649	63-14709
		63-14847
	651	63-16871
	702	63-10969
Nitrogen compounds	639	SA Code-P-157
Non-destructive testing	695	BISI-3225
Nonlinear systems	693	62-11638
Nuclear energy	708	63-31152
		63-31156
		63-31229
		63-31325
Nuclear industrial applications	663	63-11657
	676	63-31238
Nuclear power plants	707	63-31261
Nuclear reactors	707	63-31140
Nuclei	640	63-14528
	712	ATS-64Q69J
Nuclei (Biology)	606	63-15668
Nucleic acids	602	63-31346
	606	63-15668
	608	63-11660
	626	AEC-tr-5428
		AEC-tr-5430
Nucleotides	608	63-11660
Numerical analysis	692	63-14556
Nutrition	618	63-19003
	672	63-31358
Ocean bottom topography	657	63-31170
Ocean currents	653	63-31208
Oceanographic vessels	657	63-31018
Oceanology	630	63-31089
	657	63-31018
		63-31170
Oils	636	63-16574
	652	62-14556
	661	63-14936
Ontogenesis	602	63-31256
Operational calculus	670	63-19174
Optical equipment	678	63-31363
Optical instruments	678	63-31363
Optics	709	62-11621
Ores (Metal sources)	627	63-31118
	656	63-16178
Ore (Metal sources) (con.)	657	62-16639
	697	63-16825
	701	BISI-3286
	704	63-31109
Ores (Non-metallic)	704	63-31109
Organic compounds	633	63-15758
	638	63-18024
	711	ATS-25Q68G
Organic derivatives	647	ATS-11Q70R
Organic pigments	611	UCRL Trans-870
Organic solvents	642	ATS-55Q69R
Orinase	624	63-10905
Orthopedics	629	63-31268
Oscar Simigaglia works	694	BISI-3035
Oscillators	679	63-19492
Oxalates	634	63-14463
Oxidation	701	BISI-3229
	702	BISI-3198
Oxidation-reduction reactions	635	EURAEC-364
Oxides	627	63-31118
	702	BISI-3195
	707	EURAEC-365
	712	63-14456
		63-19187
Oximes	620	63-16345
	622	63-14721
	624	63-16346
	641	63-14348
Oxo process	642	SA Code-P-141
Oxonium compounds	711	63-14232
Oxygen	637	63-15504
	641	ATS-07Q70R
	648	63-11659
	695	BISI-3283
	697	BISI-2998
Packing materials	688	63-14791
Packing rings	696	63-16840
PAD	706	EURAEC-360
Paints	659	63-31223
	685	63-16831
Paleontology	654	63-31126
Palladium	643	ATS-13Q67R
Pancreas	612	62-11763/2
	615	63-23009
Paper	634	63-14221
	658	63-31155
Paralysis	633	63-31158
Parasympathomimetic agents	633	63-31158
Particle accelerators	708	63-31038
Particle trajectories	706	NRCC C-4464
Particles	681	63-14778
Passenger vehicles	679	63-31182
		63-31209
	680	63-31143
Pathology	612	62-11763/2
		62-11763/4
	627	63-31118
Pattern recognition	714	63-31172
Pavements	664	63-14739
Pearl condensation	662	63-14023
Pearlite	655	63-16182
Pectins	635	63-14371
	643	63-14965
Pellets	697	63-16825
Pelvis	629	63-31268
Penicillamine	620	63-16345
Pentadienes	690	SA Code-P-153
Pentenes	690	SA Code-P-153
Peptides	623	63-10947
Peracetic acid	641	63-16430
Perchlorates	651	63-19256
Perisperm	607	63-14790
Permeability	651	62-16454
Peroxidase	607	UCRL Trans-696
Peroxides	639	63-14825
		SA Code-P-157
	641	ATS-07Q70R
Pest control	600	61-23712
	633	63-31158
Pesticides	672	63-31358
Petroleum	650	63-18054
	658	63-31155
	659	63-31216
	682	63-10212
		63-19577
Phagocytosis	613	63-19006
	617	63-19005
Pharmacology	606	63-14613
	620	63-31250
	633	63-15758
		63-31158

Subject	Page	Number
Phase meters	709	62-18365
Phase studies	647	63-18044
		63-18045
		63-18413
	648	63-16474
	649	63-14847
	650	63-18010
	651	63-16041
	697	EURAEC-342
	713	63-14454
Phenolic plastics	681	SA Code-P-167
		SA Code-P-170
	691	63-14040
Phenols	600	63-14030
	641	ATS-07Q70R
	646	63-14750
	649	63-15246
	691	63-14247
Phenones	689	SA Code-P-117
N-Phenyl-N'-Cyclohexyl-paraphenylenediamine	641	63-14809
Phenyl radicals	641	63-14310
	645	63-14084
Phosphates	599	63-14570
	600	63-14640
	633	63-31158
	638	63-14746
	639	63-14940
	640	63-15473
	652	63-14607
	660	63-31225
	701	63-16232
Phosphinic acids	633	63-31158
Phosphinous acids	633	63-31158
Phosphites	633	63-31158
Phosphoric acids	633	63-31158
	634	63-14220
		63-14221
	640	63-14609
	641	63-14541
	643	63-14808
Phosphorus	638	63-14600
	645	ATS-85Q68R
		ATS-86Q68R
	673	63-19022
Phosphorus compounds	633	63-31158
	638	63-16093
	639	63-14526
Phosphorus transferases	610	63-10505
Phosphorylases	620	63-31250
Photochemistry	606	63-16724
	687	62-20404
Photoengraving	682	62-14899
Photographic analysis	701	BISI-3286
Photographic chemicals	686	62-20374
Photographic emulsions	687	63-14477
		63-18072
Photographic enlargers	715	63-31113
Photographic equipment	687	ATS-90Q69J
	715	63-31113
Photographic film	687	ATS-27Q70H
Photographic images	686	62-20374
	687	62-20402
		62-20404
Photography	687	ATS-34Q70P
Photometers	700	BISI-3309
Photoperiodism	608	60-21635
Photoreceptors	627	63-19253
Photosensitivity	627	63-19253
Photosynthesis	626	AEC-tr-5430
Phototropism	611	UCRL Trans-870
Phthalates	683	63-16324
	689	SA Code-P-168
Phycomycetes	610	63-10506
Physical chemistry	633	63-15758
Physics	708	63-31038
		63-31152
		63-31156
		63-31212
		63-31229
	908	63-31325
Pigments	648	TTIS NS-105
	661	ATS-95P61R
	685	63-16831
		TTIS NS-104
Pipelines	674	63-31264
Pipes	674	63-14777
	695	BISI-3225
	699	63-31289
	700	63-31049
Pituitary gland	628	63-31211
Plague	609	63-31357
	616	63-14800
		63-14850
		63-14851
Plague (con.)	617	63-14832
		63-14852
Planets	600	63-11647
Plant pigments	606	63-16723
		63-16724
Plants (Botany)	599	63-31200
	601	63-31277
	607	63-23427-(112-141)
		63-31137
	608	63-19150
		63-31237
	626	AEC-tr-5430
	633	63-31158
	672	63-14947
	711	63-11661
Plasma burner	710	62-10090
Plasma physics	705	63-15490
	710	62-10090
		63-14457
		63-14460
Plasma substitutes	626	AEC-tr-5430
Plastic coatings	701	BISI-3241
Plastic films	681	SA Code-P-167
		SA Code-P-170
	686	63-16450
	688	63-14791
	689	SA Code-P-169
Plastic paints	685	ATS-19Q70DU
Plastic surgery	629	63-31241
		63-31248
Plastic tubing	689	SA Code-P-169
Plastics	659	63-31173
		63-31177
		63-31216
	660	63-31253
		63-31262
	666	63-31176
	667	63-31335
		63-31317
	688	63-16977
		ATS-82Q69F
	689	ATS-22Q70J
	714	63-31210
Plastics industry	658	63-31155
	659	63-31223
	688	63-31061
Plating	705	63-14046
Plutonium	707	EURAEC-24
		EURAEC-365
Plywood	691	ATS-44Q69FN
Pneumatic servo-mechanisms	695	BISI-3171
Poisoning	612	62-11763/2
	621	63-23024
Poliomyelitis	612	63-31356
Polyglycol fumarates	646	ATS-18Q70H
Polyester plastics	683	63-16324
	689	SA Code-P-168
	690	63-14202
	691	63-23376
Polyethylene plastics	659	63-31173
		63-31216
	660	63-31225
	681	SA Code-P-167
		SA Code-P-170
	684	SA Code-P-119
		SA Code-P-156
	688	63-14791
		SA Code-P-160
	689	ATS-84Q68R
		SA Code-P-117
		SA Code-P-154
		SA Code-P-158
		SA Code-P-169
	690	63-14203
		SA Code-P-153
Polyethylene terephthalate	683	63-16324
	689	ATS-84Q68R
Polymerization	642	ATS-95Q69J
	643	ATS-58Q70R
	687	62-20404
Polymers	605	63-15994
	641	63-14348
	645	ATS-85Q68R
		ATS-86Q68R
		TTIS NS-83
	646	ATS-18Q70H
	714	63-31210
Polymethene	606	63-16724
Polyoxymethylene	686	ATS-29Q69J
Polyphosphonates	645	ATS-85Q68R
Polyphosphonites	645	ATS-86Q68R
Polypropylene	681	SA Code-P-170
	684	SA Code-P-156
Polypropylene (con.)	684	TTIS NS-90
	688	SA Code-P-160
	689	SA Code-P-169
Polyvinyl alcohol	681	SA Code-P-113
	690	SA Code-P-112
Polyvinyl chloride	637	63-14706
	689	SA Code-P-115
	690	63-14229
Porosity	649	62-14568
Porous materials	652	62-14556
	664	ATS-35Q70G
	682	63-10212
Potassium	639	63-16175
	704	63-16157
Potassium compounds	599	63-14626
	636	63-16158
	651	63-16871
	654	63-16264
	655	63-16265
	662	63-16103
		63-16104
	663	63-14597
		63-16109
	687	63-14477
	710	63-14453
Potentiometers	637	BISI-3281
Powder metallurgy	694	63-31343
	697	63-21525
Powders	672	63-14985
Power equipment	669	63-31234
		63-31263
Precision equipment	676	63-31203
		63-31224
		63-31238
		63-31297
		63-31303
	677	63-31317
		63-31324
		63-31337
	678	63-31348
		63-31363
	715	63-31113
Prednisone	617	63-19005
Pregnancy	623	63-14409
Preservation	602	63-31355
	672	63-14985
	673	63-14941
		63-14945
Pressure gages	706	EURAEC-276
Pressurized water reactors	707	63-31140
Probability	654	ATS-03Q70R
Programming (Computers)	709	63-31092
Prolines	606	63-14613
Propanes	684	SA Code-P-119
		SA Code-P-156
Propanols	638	63-18024
Propenes	599	SA Code-P-118
	646	ATS-38Q69R
	649	63-16036
	684	SA Code-P-156
		TTIS NS-90
	688	SA Code-P-160
	689	SA Code-P-154
		SA Code-P-158
		SA Code-P-169
	690	63-14203
Propionaldehyde	690	SA Code-P-116
Propionic acids	688	SA Code-P-160
Propionitriles	638	63-18024
Propylene chlorohydrins	649	63-16036
Prosthetics	629	63-31268
Protective coverings	680	63-19487
Protective treatments	673	63-14945
Proteins	606	AEC-tr-4903
	612	63-31356
	635	63-14248
	646	63-14598
	672	63-31358
	673	63-14960
	674	63-14650
Protons	626	AEC-tr-5428
Pseudoarthosis	629	63-31245
Psychoses	611	62-24326
	622	62-24334
	624	62-24321
	625	62-24312
		62-24313
Psychotropic agents	622	62-24334
Public health	615	63-31274
	672	63-31358
Pulicidae	630	63-31306
Pulse compression	710	62-18643

Subject	Page	Number
Pumping station	671	63-31370
Pumps	658	ATS-95Q67R
	674	63-31293
	678	ATS-22P60P
Purification	671	63-31370
Pyribenzamines	621	63-10919
Pyridine derivatives	606	63-14613
Pyridines	638	63-14244
	650	63-18010
Pyrimidines	620	63-16306
Pyrolysis	651	63-19256
Pyrometers	696	BISI-3216
Quality control	638	63-14369
	664	63-31255
Quartz	655	63-16182
Quinones	646	63-14750
Rabbits	618	63-19003
Rabies	614	63-19009
Radar	668	63-19323
Radar equipment	668	63-19323
Radiation chemistry	663	63-11657
	690	63-14229
		SA Code-P-116
Radiation effects	601	63-31127
	602	63-31256
	612	63-31356
	627	63-19253
		63-31060
	628	63-31095
		63-31211
		63-31367
		AEC-tr-5553
Radiation hazards	627	63-31118
Radiation injuries	612	63-31356
	630	63-31085
Radiation pyrometers	708	63-14657
Radiation sickness	602	63-31346
	628	63-31214
Radiation tolerance	626	AEC-tr-5430
Radio	664	63-31162
Radio astronomy	600	63-11647
Radio communication systems	668	63-14406
Radio equipment	668	63-14406
	678	63-31348
		63-31363
Radio receivers	670	63-11651
	677	63-31324
Radioactive decay	705	UCRL Trans-819(L)
Radioactive isotopes	677	63-31337
	691	NRCC C-4456
	707	63-31261
Radiobiology	626	AEC-tr-5428
		AEC-tr-5430
Radiochemistry	635	EURAEC-364
Radiofrequency pulses	709	62-18257
Radiofrequency spectroscopy	710	62-11403
Radiography	676	63-31238
Radiolysis	663	63-11657
Radioprotective agents	626	AEC-tr-5428
		AEC-tr-5430
Radon	690	63-14229
Railroad tracks	680	62-24225
		63-16471
		63-31131
Railroads	670	63-23152
	680	63-31131
Rare earth elements	711	63-11661
Reaction kinetics	651	63-19558
Reaction (Psychology)	602	63-31167
Reactor fuel cladding	707	EURAEC-354
Reactor fuel processing	707	EURAEC-365
Reactor fuels	707	EURAEC-24
		EURAEC-365
Reactor lattice parameters	707	63-31140
Reading	600	63-31199
Reagents	635	63-19144
	647	63-16258
Reciprocating pumps	660	63-31262
Rectifiers	666	63-31240
	667	63-31330
		63-31335
	678	63-31363
Redfish	632	63-15208
		63-15209
Refineries	695	BISI-3283
Reflexes	628	AEC-tr-5553
Refraction	605	63-15994
Refractory coatings	681	63-11658
Refractory materials	681	63-11658
	682	63-11656
Refrigerant compressors	669	63-31233
Refrigerant condensers	669	63-31233
Refrigerants	682	63-19216
Refrigeration systems	669	63-31181
		63-31233
Relaxil G.	622	63-15993
Reliability (Electronics)	664	63-31255
Repeaters (Transmission systems)	676	63-31297
Reproduction	630	63-31056
Reproduction (Physiology)	631	NRCC C-4443
	632	NRCC C-4466
Research program administration	714	63-31210
	715	63-31242
Resorcinol	645	63-14403
Respiratory system	604	63-15992
	609	63-31357
	612	62-11763/4
	613	63-19016
Reticuloendothelial system	609	63-31357
Retina	626	AEC-tr-5430
	627	63-19253
Rhizosphere microflora	610	63-31153
Rhythm (Biology)	630	63-31085
Ribonucleic acids	605	63-15994
	606	63-15668
	608	63-19331
Rickettsia	609	63-31308
Road-building equipment	674	63-31264
Roads	664	63-21590
Rock salt	655	63-16265
Rods	695	BISI-3225
Rolling mills	678	BISI-3206
	700	63-31049
Rotary pumps	678	ATS-22P60P
Rotation	691	ATS-44Q69FN
Rubber	681	SA Code-P-167
		SA Code-P-170
	691	63-14418
		63-14810
Rubidium compounds	651	63-16871
Rumania	668	63-31066
Russian to Lithuanian (Machine translation)	715	63-31161
Ruthenium	635	AEC-tr-4840
Saccharides	634	63-14219
	635	63-14248
Safety	671	63-19649
Salivary glands	633	63-31158
Salmonella	610	63-31319
	612	62-11763/4
Salmonidae	630	63-31035
		NRCC C-4439
	631	NRCC C-4446
		NRCC C-4447
	632	NRCC C-4460
Salts	649	63-14516
Sand	653	63-31183
Satellites (Artificial)	670	63-11651
		63-19520
Scheuerman's disease	623	63-10932
Schistosomiasis	615	62-23688
Scientific organizations	710	63-31166
	714	63-31272
	715	63-31239
	717	63-31219
Scientific research	653	63-31183
		63-31192
	714	63-21415
		63-31194
	717	63-11646
Scoliosis	629	63-31268
Scorpaenidae	631	NRCC C-4450
		NRCC C-4451
Sea of Azov	631	NRCC C-4443
Secretion	673	63-15988
Seeds	607	63-14790
	636	63-16574
	663	63-14529
Selenium	637	63-14446
Semiconductors	712	63-19187
Semi-killed steel	699	63-31347
Sensitivity	618	63-15999
Sensory mechanisms	604	63-15992
Serotonin	620	63-31250
Serum proteins	611	62-24326
Sex glands	620	63-10491
Shafts	669	63-19183
Shale	658	63-31155
Shear stresses	599	63-14570
Sheathing	696	BISI-3216
Sheep	599	63-19018
Sheets	688	ATS-82Q69F
	693	BGIRA-555
Shock (Mechanics)	654	63-16264
Siderosis	620	63-16345
	622	63-14721
Silanes	640	63-31187
Silicon alloys	696	BISI-3152
Silicon compounds	640	63-31187
	646	ATS-38Q69R
Silicones	683	63-16324
Single crystals	711	62-16597
	713	63-14465
Sintering	682	63-11656
Siphonaptera	630	63-31306
Skin	602	63-31355
	621	63-16590
	622	62-24315
Slide rule	692	63-14556
Small parameter method	668	63-31103
Smallpox	612	62-11763/2
Smokes	613	63-16585
	636	63-16572
		63-16573
	637	63-14394
Snow vehicles	679	63-31182
Soaps	648	63-16474
Social sciences	717	63-31094
Sodium	639	63-16175
	658	63-10970
	682	63-10961
	703	63-14814
	704	63-16157
	705	63-14817
Sodium alloys	651	63-16041
	702	63-10969
Sodium compounds	600	63-14030
	636	63-16158
	639	63-14825
		63-14940
	641	63-10952
	643	63-16027
	647	63-18044
	657	63-14101
	661	63-14240
		63-14241
		63-14242
	663	63-14245
		63-14597
	674	63-14650
	688	SA Code-P-121
Soils	601	63-31277
	652	63-31191
	711	63-11661
Solids	649	62-14568
Solubility	662	63-16103
	663	63-16109
	672	63-14947
Solvay process	663	63-14245
Solvent extraction	635	AEC-tr-4840
	642	63-18417
		ATS-55Q69R
	662	63-14821
	663	63-14529
Sorption	691	63-14397
Sound reproduction systems	678	63-31363
Souvenirs	659	63-31223
Space flight	670	63-19520
Space medicine	601	63-31127
	602	63-31167
Spectra (Infrared)	711	63-14232
Spectrum analyzers	676	63-31238
Speech	609	62-23459
Speech recognition	714	63-31145
Spheres	681	63-14778
Spinal column	623	63-10932
Spinal cord	626	AEC-tr-5428
Spinneret	684	ATS-12Q70R
Spinning	678	ATS-22P60P
	684	ATS-79Q69J
Spirochaeta	624	63-10518
Spirochetosis	614	63-15997
Stability	706	EURAEC-276
Stainless steel	696	63-16840
	700	BISI-3309
Starches	643	63-14965
	672	63-14796
Statistical distributions	709	62-11621
Statistical functions	692	63-10779
	710	62-11403
Steam	702	BISI-3198
Steam turbines	669	63-31263

Subject	Page	Number
Steel	598	63-31296
	637	BISI-3281
	638	63-14600
	684	ATS-12Q70R
	694	BISI-3192
	696	BISI-3152
	697	EURAEC-342
	698	63-31266
	699	63-31289
		63-31301
		63-31347
	700	62-24149
		63-31049
		BISI-3276
	701	63-16388
		ATS-32P61G
		BISI-3182
		BISI-3229
		BISI-3241
	702	63-16537
		63-16863
		63-31120
		BISI-3195
	705	63-14078
		BISI-3240
Steel industry	696	BISI-3212
	702	BISI-3209
	711	BISI-3247
Stereochemistry	606	63-14564
	633	63-31158
Steroids	619	63-19015
	620	63-10491
		63-31215
Stilbenes	645	63-14084
Stimulation	608	63-19331
Storage batteries	676	63-31238
Strain gages	696	BISI-3212
Strainers	671	63-31370
Stratigraphy	655	63-19586
Streptococcus	610	63-10505
Streptokinase	610	63-10505
Streptomycins	602	63-31256
	622	63-16527
Stresses	692	63-14556
	693	63-10252
Structural geology	655	63-16215
Students	627	63-31060
	715	63-31249
Styrene plastics	690	SA Code-P-112
Subsonic flow	694	63-19479
Substitution reactions	644	63-16184
		63-16185
Sulfates	599	63-14570
	636	63-16158
	639	63-14527
	649	63-14516
		63-15246
	656	63-16180
	662	63-16103
		63-16104
	663	63-16109
	682	63-19577
	712	ATS-73Q69J
Sulfides	621	63-23024
	636	63-16572
	637	63-14082
Sulfonates	642	63-14705
Sulfur	637	63-14446
	655	63-31206
	695	BISI-3250
	701	BISI-3267
	705	BISI-3223
Sulfur compounds	637	63-15504
	639	63-16411
	649	63-14709
Sulfuric acid	634	63-14219
		63-14221
	643	63-14808
	647	63-18045
	659	63-31223
	683	63-14087
Supersonic flow	694	63-19479
Surface-active substances	649	63-15246
	651	ATS-88Q69J
	662	63-16441
Surfaces	700	BISI-3276
Surgery	612	62-11763/4
	617	63-23665
	629	63-31241
Surgical trauma	629	63-31268
Sylvinite	663	63-14597
Syntax	714	63-31145
Synthetic rubber	659	63-31173
	681	SA Code-P-167
		SA Code-P-170
Synthetic stones	658	63-31155
	682	63-11656
	704	63-31109
Szilard-Chalmers effect	908	63-31325
Tanning agents	634	63-14385
Tantalum	648	63-11659
	706	EURAEC-362
Tantalum compounds	712	63-14456
Tar	624	63-14387
	650	63-18054
	691	63-14247
Taraxein	611	62-24326
Taste	605	K-H-10825
Taxonomy	607	63-31137
	632	61-11435
Te Hung Thai	653	63-31192
Telegraph systems	676	63-31238
Telephone equipment	678	63-31363
Teletype equipment	715	62-16970
Teletype systems	715	62-16968
		62-16970
Television equipment	664	63-31255
Television receivers	676	63-31203
		63-31303
	677	63-31324
Temperature control	662	63-14831
	677	63-31317
	678	63-31363
Temperature sensitive elements	697	EURAEC-343
Tempering	696	63-23210
Tensiometers	696	BISI-3212
Tents	680	63-19487
Terrain	653	63-31192
Terrestrial magnetism	706	NRCC C-4464
Tetraethyllead	683	63-14293
Textiles	683	63-16012
	684	ATS-79Q69J
	685	ATS-80Q60J
Thalamus	603	63-19020
Therapy	608	63-31304
Thermal conductivity	682	63-10212
	713	63-14465
		BISI-3260
Thermal radiation	671	63-19649
Thermochemistry	651	63-19256
Thermocouples	662	63-14831
	713	63-14465
Thermodynamics	713	63-19312
Thermoelectric converters	710	63-31166
Thermoelectric generators	713	63-14465
Thermophotography	686	63-16450
Thermosetting plastics	690	63-14202
Thiosulfates	637	63-14082
Thiourea derivatives	625	63-10920
Thorax	604	63-15667
Thorium compounds	627	63-31118
	651	63-19558
	681	63-11658
Thymus gland	626	AEC-tr-5428
Thyroid gland	604	63-19011
	614	63-23015
Ticks	609	63-31308
	633	63-31158
Tin alloys	707	EURAEC-354
Tin compounds	641	63-14310
Tires	658	63-31155
	659	63-31173
		63-31216
		63-31223
	660	63-31225
	691	63-14418
Tissues (Biology)	619	63-19024
Titanic acid	640	63-14528
Titanium	635	63-19144
	640	63-14528
	697	63-14435
Titanium compounds	636	63-15481
	640	63-14528
	651	63-19558
	685	TTIS NS-103
		TTIS NS-104
		TTIS NS-106
	689	SA Code-P-154
	690	63-14203
		63-14208
Tobacco	599	63-16617
	600	K-H-5389-c
	605	K-H-10825
	618	63-16586
	635	63-14371
	636	63-16572
		63-16574
Tobacco (con.)	637	63-14394
	638	63-14369
		K-H-3517-a
	686	K-H-6311-b
Tolerances (Physiology)	604	63-31198
	623	62-24330
	625	63-10920
Toluenes	644	63-16185
Torches	700	BISI-3276
Touch	600	63-31199
Towers (Chemistry)	642	63-18417
	661	63-14141
		63-16037
		SA Code-P-151
Towing vehicles	679	63-31209
Toxicity	620	63-10924
		63-31250
Toxins and antitoxins	606	63-15983
Tracer studies	621	62-24332
	701	BISI-3182
Tractor engines	598	63-31296
Tractors	597	63-31226
		63-31231
		63-31259
	598	63-31275
		63-31276
		63-31287
		63-31296
	674	63-31264
	679	63-31182
		63-31209
		63-31254
Trailers	679	63-31254
Transaminases	615	63-19368
Transformations	697	EURAEC-343
Transformations (Mathematics)	715	62-16968
Transformers	659	63-31171
	665	63-31141
	666	63-31196
		63-31240
	667	63-31330
		63-31335
	669	63-31234
	678	63-31363
Transistors	677	63-31324
Transmission lines	709	62-16683
Transplantation	629	63-31241
		63-31245
Transportation	670	63-23152
Trees	607	63-31137
	608	60-21635
		63-31237
Trematodes	633	63-31158
Treponema pallidum	624	63-10518
Tricyclohexyllead hydroxide	641	63-14310
Trinitrophenetole	671	63-16422
Triphenylborines	643	63-16027
Triphenylboryl sodium	643	63-16027
Triphenyllead hydroxide	641	63-14310
Triphenyltin hydroxide	641	63-14310
Tritium	705	62-16662
Tritium reservoir	705	62-16662
Trona	657	63-14101
Tropical regions	664	63-21590
Tropopause	653	63-19850
Tumors	616	63-19026
	629	63-31241
		63-31268
Tungsten	648	63-14464
Tungsten compounds	712	63-14456
Tungstic acid	646	ATS-38Q69R
Turbines	667	63-31050
		63-31330
Turbulent flow	694	63-19435
Typhoid	610	63-31319
	617	63-19005
Ultramarine	661	ATS-95P61R
Ultrasonic radiation	676	63-31238
Ultraviolet radiation	627	63-31060
Underwater illumination	631	NRCC C-4455
Universities	717	63-31219
Uranium	636	63-15481
	707	EURAEC-365
Uranium compounds	627	63-31118
	651	63-19558
	681	63-11658
	706	EURAEC-361
		EURAEC-362
	707	EURAEC-24
Urea	644	ATS-67Q69R
Urethanes	642	62-18037
Urinary system	624	63-16542
Urine	619	63-19015

Subject	Page	Number
Vaccines	609	63-31357
	610	63-31323
Vacuum cleaners	678	63-31363
Vacuum pumps	702	63-31120
Valeric acids	638	63-14222
Valine	646	63-14598
Van de Graaff generators	705	62-16662
Vanadium	636	63-15481
Vanadium catalysts	639	63-16411
Vapor pressure	649	63-16036
	651	63-16871
Varnishes	659	63-31216
	666	63-31176
	682	62-14899
	685	TTIS NS-108
Vasoactive agents	620	63-10924
	625	63-23023
Vehicle chassis components	598	63-31296
	680	BISI-3238
Venereal diseases	613	63-16575
	624	63-10518
Ventilation fans	678	63-31363
Venus	600	63-11647
Veterinary medicine	601	63-31157
		63-31326
Vibrio	610	63-31319
Vietnam	664	63-21590
Vimba	630	63-31085
Vinyl chlorides	663	63-14028
	690	63-14229
Vinyl plastics	688	SA Code-P-120
	690	63-14208
Vinyl radicals	637	63-14706
Vinylidene chloride	689	SA Code-P-115
Virus diseases	616	63-14800
Viruses	601	63-31277
	613	63-19016
	617	63-14852
Viscosity	686	TTIS NS-101
Vision	600	63-31199
Vitamin B complex	613	63-19006
Vitamin D	619	63-15989
Vitamin E	622	63-14395
	623	63-14409
Vitamins	620	63-31215
	672	63-31358
Wastes (Industrial)	635	63-14371
	662	63-16441
	663	63-14597
Wastes (Sanitary engineering)	671	63-14366
Water	671	63-15954
	711	63-11661
Water injection	652	62-14556
Water supplies	671	63-14366
Water vapor	649	63-14709
	691	63-14397
Wave transmission	709	62-16683
Waveform generators	709	62-16683
Welding	597	63-31226
	680	63-16471
	696	63-16840
Well drilling	654	63-31134
	658	ATS-51Q68R
	666	63-31240
Well logging	658	ATS-51Q68R
Whey	672	63-14985
Whooping cough	612	62-11763/2
Wiener problem	711	ATS-88Q68J
Wind	653	63-19850
		63-31124
		63-31208
Wind sifting	673	63-14960
Wood	634	63-14151
	635	63-14248
	691	63-14247
Wood (con.)	691	63-14397
		NRCC C-4456
Wood pulp	659	63-31173
Woolen textiles	684	63-15307
Wounds and injuries	612	63-11763/2
Wronskian formula	692	63-10155
Wustite	702	BISI-3195
Xenon	706	EURAEC-361
		EURAEC-362
Xylenes	647	63-18413
Yeasts	626	AEC-tr-5428
		AEC-tr-5430
Yield point	696	BISI-3212
Yunnan province	653	63-31192
Ziegler catalysts	688	SA Code-P-120
		SA Code-P-121
	689	SA Code-P-154
	690	63-14203
		63-14208
		SA Code-P-153
Zinc	695	63-14209
		63-16845
	701	BISI-3286
Zinc compounds	599	SA Code-P-118
	649	63-15246
	681	SA Code-P-113
	688	SA Code-P-121
	689	SA Code-P-168
Zinc electrodes	664	63-16326
Zinc ethylenebisdithiocarbamate	636	63-16572
Zirconium	635	63-19144
Zirconium compounds	637	63-15504
	651	63-19558
	681	63-11658
Zoonoses	609	63-31357

JOURNAL INDEX

Journal	Page
Academie des Sciences, Paris. Comptes Rendus (France)	
1944, v. 218, p. 610-612	646
1962, v. 255, p. 912-913	650
1963, v. 256, p. 634-637	709
Accademia Nazionale die Lincei. Classe di Scienze Fiziche Matematiche e Naturali. Rendiconti (Italy)	
1954, ser. 8, v. 17, p. 315-322	607
Acta Chimica (Hungary)	
1962, v. 33, p. 381-385	637
Acta Hydrobiologica Sinica (sic)(USSR)	
1955, no. 1, p. 56	602
Acta Technica (Hungary)	
1961, v. 35/36, p. 219-236	701
Akademiya Meditsinskikh Nauk SSSR. Vestnik,	
1962, v. 17, no. 6, p. 7-16	619
1962, v. 17, no. 6, p. 23-35	616
1962, v. 17, no. 8, p. 16-22	604
1962, v. 17, no. 8, p. 44-50	622
Akademiya Nauk Armyanskoi SSR Erevan. Doklady,	
1961, v. 33, no. 2, p. 49-52	650
Akdemiya Nauk Gruzinskoi SSR, Tiflis. Soobshcheniya,	
1963, v. 30, no. 2, p. 213-220	628
Akademiya Nauk Gruzinskoi SSR, Tiflis. Trudy Vychislitel'nogo Tsentra,	
1960, v. 1, p. 263-282	692
Akademiya Nauk Latviiskoi SSR, Riga. Institut Lesokhozyaistvennykh Problem i Khimii Drevesiny. Trudy,	
1960, v. 19, p. 65-70	646
Akademiya Nauk SSSR. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S.,	
1945, v. 47, no. 7, p. 472-474	646
Akademiya Nauk SSSR. Doklady,	
1953, v. 88, no. 3, p. 475-478	644
1956, v. 110, no. 5, p. 723-726	693
1957-61, v. 112-141	607
1958-61, v. 118-141	605
1960, v. 134, no. 3, p. 511-513	692
1961, v. 137, no. 3, p. 715-718	607
1961, v. 140, no. 6, p. 1321-1323	606
1962, v. 144, no. 1, p. 129-131	713
1962, v. 145, no. 1, p. 129-132	606
1962, v. 147, no. 3, p. 622-624	712
1963, v. 148, no. 6, p. 1397-1399, 1425-1427	602
1963, v. 149, no. 1, p. 65-67	600
Akademiya Nauk SSSR. Ikhtiologicheskaya Kommissiya. Trudy Soveshchanii,	
1954, no. 3, p. 40-49	632
1961, no. 13, p. 5-6, 44-46	630
1961, no. 13, p. 132-146	631
1961, no. 13, p. 147-157	631
1961, no. 13, p. 307-313	632
1961, no. 13, p. 487-495	630
Akademiya Nauk SSSR. Institut Biologii, Sverdlovsk. Trudy,	
1962. no. 28, 135p.	B-17
Akademiya Nauk SSSR. Institut Genetiki. Trudy,	
1962, v. 29, 471p.	B-17
Akdemiya Nauk SSSR. Institut Lesa i Drevesiny Krasnoyarsk. Trudy,	
1961, v. 56, p. 89-103	608
Akademiya Nauk SSSR. Institut Nefti, Trudy,	
1958, v. 12, p. 76-82	650
Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya,	
1962, v. 27, no. 1, p. 117-121	611
1962, v. 27, no. 2, p. 260-270	618
1962, v. 27, no. 6, p. 857-868	608
1963, v. 28, no. 2, p. 249-260	655
Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya,	
1959, v. 23, no. 8, p. 941-947	709
Akademiya Nauk SSSR. Izvestiya. Seriya Geologicheskaya,	
1963, v. 28, no. 5, p. 3-8	654
Akademiya Nauk SSSR. Murmanskii Morskoi Biologicheskii Institut. Trudy,	
1961, no. 3(7) p. 1-220	B-17
Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya,	
1957, no. 1, p. 100-111	644
1957, no. 10, p. 1229-1234	644
1957, no. 12, p. 1497-1499	645
1961, no. 2, p. 367-368	645
1962, no. 11, p. 2002-2008	647
1963, no. 1, p. 186-187	644
1963, no. 2, p. 359-364	645
Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya	
1948, no. 4, p. 433-448	709
Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Mekhanika i Mashinostroenie,	
1962, no. 3, p. 24-30	694
Akademiya Nauk SSSR. Otdelenie. Tekhnicheskikh Nauk Izvestiya: Tekhnicheskaya Kibernetika,	
1963, no. 2, p. 3-16	714
Akademiya Nauk SSSR. Sibirskoe Otdelenie. Izvestiya,	
1961, no. 10, p. 3-9	715
Akademiya Nauk SSSR. Zoologicheskii Institut. Trudy Problemnykh i Tematicheskikh Soveshchanii,	
1956, v. 6, p. 2	632
Akusherstvo i Ginekologiya (USSR)	
1962, v. 38, no. 1, p. 101-102	618
Angewandte Chemie (Germany)	
1930, v. 43, p. 302-308	650
1948, v. 60, no. 7/8, p. 175-179	673
1956, v. 68, no. 20, p. 633-640	690
1957, v. 69, no. 7, p. 213-219	690
1959, v. 71, no. 6, p. 205-210	690
Annalen der Physik (East Germany)	
1947, ser. 6, v. 1, p. 190-206	713
Annali di Chimica (Italy)	
1956, v. 46, p. 194-198	637
Archiv der Elektrischen Ubertragung (West Germany)	
1955, v. 9, no. 11, p. 528-532	715
1961, v. 15, no. 7, p. 303-307	709
Archiv für das Eisenhüttenwesen (West Germany)	
1956, v. 27, no. 3, p. 161-163	695
1959, v. 30, no. 12, p. 737-742	705
1962, v. 33, no. 10, p. 723-727	705
1962, v. 33, no. 12, p. 841-851	696
Archiv für Experimentelle Veterinärmedizin (East Germany)	
1963, v. 17, no. 2, p. 263-303, 305-313, 315-353, 355-369, 375-401, 403-417, 419-437, 439-497	601
Archiv für Mikrobiologie (Germany)	
1960, v. 37, p. 7-17	610
1960, v. 37, p. 57-94	623
Archiv für Tierernährung (East Germany)	
1960, v. 10, no. 6, p. 401-413	599
Archiwum Gornictwa i Hutnictwa (Poland)	
1955, v. 3, no. 3, p. 401-435	695
Arkhiv Anatomii, Gistologii i Embriologii (USSR)	
1962, v. 42, no. 2, p. 83-93	603
Arkhiv Patologii (USSR)	
1962, v. 24, no. 1, p. 70-78	617
1962, v. 24, no. 3, p. 39-44	614
1962, v. 24, no. 3, p. 60-68	618
1962, v. 24, no. 4, p. 78-79	603
1962, v. 24, no. 9, p. 33-39	616
Arkiv for Matematik (Sweden)	
1949, v. 1, no. 13, p. 141-160	692
Arzneimittel-Forschung (West Germany)	
1961, v. 11, p. 110-113	605
Asociacion Quimica Argentina. Anales,	
1955, v. 43, p. 215-225	638
Automatica si Electronica (Rumania)	
1963, v. 7, no. 1, p. 45-46	668
Aviatsionnyi Institut, Moscow. Trudy (USSR)	
1962, v. 145, p. 60-98	679
Avtogennoe Delo (USSR)	
1952, v. 23, no. 8, p. 22-23	696
Avtomaticheskoe Regulirovanie Aviadvigatelei (USSR)	
1961, v. 3, p. 1-32, 51-135	B-17
1962, v. 4, p. 5-69, 95-135	B-17
Avtomatika i Telemekhanika (USSR)	
1963, v. 24, no. 1, p. 3-6	715
Avtomobil'nyi Transport (USSR)	
1963, v. 41, no. 4, p. 48	679
Bakinskii Rabochii (USSR)	
1963, 2 June, p. 1	667
Bänder, Bleche, Rohre (West Germany)	
1961, no. 2, p. 64-67	678
1963, no. 1, p. 16-21	695
Beitrage zur Tabakforschung (sic)	
1962, no. 7, p. 285-290	637
Belorusskii Politekhnicheskii Institut. Sbornik Nauchnykh Rabot (USSR)	
1960, v. 82, p. 86-165	B-17
Bergbautechnik (East Germany)	
1954, v. 4, no. 3, p. 132-139	654
1960, v. 10, no. 1	655
die Biogenen Amine	
1940, chap. 4, p. 171-210	606
Biotsenozi Obrastanii v Kachestve Biopoglotitelya, Moscow,	
1961, p. 8-15, 130-220, 297-314, 341-349	671
Boletin de Minas y Petroleo (Mexico)	
1945, v. 16, no. 1, p. 8-14	656
Boletin Minero (Mexico)	
1922, v. 13, no. 3, p. 312-318	656
Brennstoff-Chemie (West Germany)	
1950, v. 31, p. 143-145, 148	683
Brussels Free U. (Belgium)	
May 62	635
Bulgarski Tyutun,	
1960, v. 5, no. 9/10, p. 429-439	605
Bumazhnaya Promyshlennost' (USSR)	
1963, v. 38, no. 1, p. 7-8	716
Byulleten' Eksperimental'noi Biologii i Meditsiny (USSR)	
1958, v. 46, no. 9, p. 96-100	614
1962, v. 53, no. 2, p. 123-125	604
Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR)	
1962, no. 11, p. 3-19	697
1963, no. 4, p. 2	716
1963, no. 4, p. 39-41	674
1963, no. 4, p. 42-51	669
1963, no. 4, p. 70-71	716
Centre de Documentation Sidérurgique. Circulaire d'Informations Techniques (France)	
1962, v. 19, no. 5, p. 1259-1276	700
1963, v. 20, no. 3, p. 743-748	695
Chemicke Listy (Czechoslovakia)	
1956, v. 50, p. 748-751	638
Chemicky Prumysl (Czechoslovakia)	
1958, v. 8(33) p. 545-551	662
1962, v. 12(37) no. 12, p. 655-658	648
Chemie-Ingenieur-Technik (West Germany)	
1955, v. 27, no. 1, p. 1-4	599
Chemiefasern (West Germany)	
1962, v. 12, no. 6, p. 398-401	683
Chemiker Zeitung (Germany)	
1907, v. 31, p. 67-69	663
1935, v. 59, p. 113-114	691
1939, v. 63, p. 737-740, 752-754	635
Chemische Berichte (Germany)	
1926, v. 59, p. 777-783	643
1935, v. 68, p. 2070-2083	634
1936, v. 69, p. 549-552	634
1936, v. 69, p. 553-559	634
1941, v. 74, p. 1456-1459	638
Chemische Gesellschaft in der Deutschen Demokratischen Republik. Mitteilungsblatt (East Germany)	
1963, v. 10, no. 3, p. 41-60	640
Chemische Industrie (West Germany)	
1953, v. 5, no. 2, p. 66-68	661
1953, v. 5, no. 3, p. 125-131	661
1953, v. 5, no. 5, p. 385-392	661
Ch'i Lien Shan Ti Chih Chih, Peiping,	
1960, v. 1, 320p.	654
1960, v. 4, bk. 1, 162p.	654
Chih Sha Yen Chiu, Peiping,	
1962, 203p.	653
Chronique des Mines et Recherche Minière (France)	
1961, v. 23, no. 297, p. 9-14	655

Journal	Page
Chung Kuo Sen Lin Chih Wu Ti Li Hsüeh, Peiping, 1960, 99p.	607
Congres Internationaux de Chimie Industrielle (no. 21) Brussels, 1948. Comptes Rendus, p. 166-167	661
Congresso Internacional de Quimica Pura Pura y Aplicada, Madrid, 1934 1935, v. 4, p. 371-382	671
Convention of Chemical Professors, Heidelberg, 18 Apr 47	641
Denki Kagaku (Japan) 1962, v. 30, no. 8, p. 582-586	651
Denshi Shashin (Japan) 1962, v. 4, no. 2, p. 32-36	687
Deutsche Medizinische Wochenschrift (West Germany) 1962, v. 87, 9 Nov, p. 2288-2290	620
DEW Technische Berichte [sic] 1962, v. 2, Nov, p. 166-173	713
el Dia Medico (Argentina) 1962, v. 34, 18 June, p. 1046	621
Dinamicheskie i Flyuktuatsionnye Oshibki Upravlyaemykh Ob"ektov, Moscow, 1961, 214p.	670
Dinamika Samoleta, Moscow, 1956, 422p. (Izbrannye Trudy, no. 1)	B-18
Duvan (Yugoslavia) 1961, v. 11, no. 6/7, p. 211-216	599
Ekonomicheskaya Gazeta (USSR) 1963, no. 9(82) p. 47-48	716
1963, no. 11(84) p. 47	667
1963, no. 13(86) p. 41	676
1963, no. 13(86) p. 47-48	716
1963, no. 14(87) p. 5	660
1963, no. 15(88) p. 3-4	660
1963, no. 15(88) p. 38-42	664
1963, no. 15(88) p. 46	667
1963, no. 17(90) p. 11	704
1963, no. 21(94) p. 48	679
1963, no. 23(96) p. 47	717
1963, no. 25(98) p. 11-12, 43, 45-47	700
Ekonomika Stroitel'stva (USSR) 1963, no. 3, p. 35-42	664
Eksperimental'naya Khirurgiya i Anesteziologiya (USSR) 1963, v. 8, no. 2, p. 30-31, 46-47	629
Elektricheskie Tensometry Soprotivleniya, Moscow, 1961, 335p. (originally pub. in Czechoslovakian)	B-17
Elektrichestvo (USSR) 1962, no. 11, p. 7-13	679
1963, no. 4, p. 1-5	709
Elektromagnitnye Fluktuatsii v Plazme. Khar'kov U. 1963	B-18
Elektrotechnik und Maschinenbau (Austria) 1946, v. 63, no. 11/12, p. 254-256	702
Elementy Chislennogo Analiza i Matematicheskoi Obrabotki Rezultatov Opyta, Moscow, 1962.	B-17
Energeticheskie Yadernye Reaktory Moscow, 1961, p. 311-333	707
Energia es Atomtechnika (Hungary) 1963, v. 16, no. 3, p. 142-143	707
ETZ Elektrotechnische Zeitschrift. Ausgabe A. Zentralblatt für Elektrotechnik (Germany) 1941, v. 62, no. 26, p. 589-591	709
Farmakologiya i Toksikologiya (USSR) 1963, v. 26, no. 2, p. 131-138, 157-163, 172-179, 184-188	620
Fauna S. S.S. R. Novaya Seriya, 1952, v. 48	632
Fette Seifen Anstrichmittel (West Germany) 1963, v. 65, p. 11-13	622
Fizika Tverdogo Tela (USSR) 1962, v. 4, no. 11, p. 3350-3351	710
Fiziologicheskii Zhurnal SSSR, 1962, v. 48, no. 6, p. 742-747	604
1962, v. 48, no. 7, p. 813-822	603
Freiberger Forschungshefte. Reihe B. Huttenwesenmetallurgie (West Germany) 1962, v. 68, p. 5-18	694
Frequenz (Germany) 1961, v. 15, no. 4, p. 111-112	668
Funktsii i Matritsy Grina v Operatsionnom Ischislenii, Minsk, 1963	B-17
Gann (Japan) 1956, v. 47, no. 3/4, p. 359-360	622
Gazzetta Chimica Italiana, 1957, v. 87, p. 159-170	650
Geodeticky a Kartograficky Obzor (Czechoslovakia) 1963, v. 9, no. 5, p. 114-144	652
Geomagnetizm i Aeronomiya (USSR) 1963, v. 3, no. 1, p. 157-170	670
Gidroliznaya i Lesokhimicheskaya Promyshlennost' (USSR) 1963, v. 16, no. 3, p. 1-3	659
Gigiena i Sanitariya (USSR) 1963, v. 28, no. 4, p. 95-96	627
Gigiena Truda i Professional'nye Zabolevaniya (USSR) 1963, v. 7, no. 4, p. 3-9	627
Glutaminsäure, n.p., 30 Jan 31, 5p. (PB 27 885)	642
Gorno-Obogatitel'noe Delo (USSR) 1932, no. 1, p. 22-28	663
Gornyi Zhurnal (USSR) 1963, no. 4, p. 26-31	704
Gosudarstvennyi Institut Prikladnoi Khimii. Trudy (USSR) 1935, v. 24, p. 32-47	642
Hahn-Meitner-Institut für Kernforschung, Berlin (West Germany) n.d.	706
Hautarzt (West Germany) 1957, v. 8, p. 58-65	617
Helvetica Chimica Acta (Switzerland) 1925, v. 8, p. 900-923	634
1945, v. 28, p. 1362-1370	645
1953, v. 36, p. 1436-1444	651
Helvetica Medica Acta (Switzerland) 1962, v. 29, no. 5/6, p. 674-679	624
Helvetica Physica Acta (Switzerland) 1961, v. 34, 15 Aug, p. 370-373	711
Hokkaido U. (Japan) 1928, v. 24, no. 1, p. 25-38	634
Holz als Roh- und Werkstoff (West Germany) 1959, v. 17, no. 5, p. 205-212	691
1960, v. 18, no. 8, p. 304-308	691
Hoppe-Seyler's Zeitschrift für Physiologische Chemie (West Germany) 1914, v. 92, p. 445-494	646
1948, v. 283, p. 31-34	606
Hua Hsüeh Hsüeh Pao (Chinese People's Republic) 1959, v. 25, nos. 1-6	633
Hua Hsüeh Taipei (Formosa) 1961, p. 1-11	600
Idojaras (Hungary) 1963, v. 67, no. 1, p. 1-55	652
I. G. Farbenindustrie, A. G., n.p., n.d.	691
I. G. Farbenindustrie, A. G., Frankfurt A.M., n.d. n.d.	703 705
l'Industria Italiana del Cemento, 1961, v. 31, no. 8, p. 385-396	664
Institut Pasteur Paris. Annales (France) 1932, v. 48, no. 2, p. 208-267	616
International Atomic Energy Agency Conference on Operating Experience of Power Reactors, Vienna, June 62. Proceedings, Paper CN-15/40	B-17
Inzhenerno-Fizicheskii Zhurnal 1962, v. 5, no. 5, p. 15-20	694
1962, v. 5, no. 6, p. 21-26	713
Izvestiya (USSR) 1963, 12 Jan, p. 4	658
1963, 29 Apr, p. 4	598
1963, 17 June, p. 3	716
Izvestiya Vysshikh Uchebnykh Zavedenii. Chernaya Metallurgiya (USSR) 1962, no. 3, p. 122-124	701
Izvestiya Vysshikh Uchebnykh Zavedenii. Elektromekhanika (USSR) 1961, v. 4, no. 9, p. 3-21	693
Izvestiya Vysshikh Uchebnykh Zavedenii. Fizika (USSR) 1962, no. 3, p. 65-73	712
Izvestiya Vysshikh Uchebnykh Zavedenii. Geologiya i Razvedka (USSR) 1962, v. 5, no. 9, p. 73-85	654
Izvestiya Vysshikh Ucebnykh Zavedenii. Khimiya i Khimicheskaya Tekhnologiya (USSR) 1962, v. 5, no. 4, p. 529-532	651
Izvestiya Vysshikh Uchebnykh Zavedenii. Neft'i Gaz (USSR) 1962, v. 5, no. 10, p. 35-40	658
Izvestiya Vysshikh Uchebnykh Zavedenii. Pishchevaya Tekhnologiya (USSR) 1961, no. 1, p. 12-16	643
Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1959, v. 2, p. 508 509	710
1963 v. 6. no. 2,	B-17
Izvestiya Vysshikh Uchebnykh Zavedenii. Radiotekhnika (USSR) 1963, v. 6, no. 1, p. 3-114	664
Izvestiya Vysshikh Uchebnykh Zavedenii. Tsvetnaya Metallurgiya (USSR) 1962, v. 5, no. 5, p. 113-122	651
Jen Min Jih Pao (Chinese People's Republic) 1963, 9 Apr, p. 5; 23 Apr, p. 5	714
Jernkontoret Stockholm. Annaler (Sweden) 1962, v. 146, no. 6, p. 453 461	700
Joint Institut for Nuclear Research Dubna (USSR) p. 802, n.d., 16p.	705
Journal de Pharmacie et de Chime (France) 1930, ser. 8, v. 11, p. 46-47	642
Journal de Physique et le Radium (France) 1956, v. 17, no. 5, p. 449	705
1961, v. 22, no. 6, p. 139A-140A	668
Journées Internationales de Sidérurgie, Luxembourg, 1-4 Oct 62. Proceedings	695
1-4 Oct 62. Proceedings p. 45-57	696
1-4 Oct 62. Proceedings p. 58-68	695
1-4 Oct 62. Proceedings p. 69-84	696
1-4 Oct 62. Proceedings p. 302-310	694
Justus Liebigs Annalen der Chemie (Germany) 1869, v. 6, p. 376-380	645
1905, v. 355, p. 137-143	639
Kauchuk i Rezina (USSR) 1958, v. 17, no. 11, p. 18-21	691
1961, v. 20, no. 8, p. 16-20	691
Kazakhstanskaya Pravda (USSR) 1963, 20 Feb, p. 2	669
1963, 4 June, p. 2	703
1963, 5 June, p. 2	717
1963, 8 June, p. 2	717
Kep es Hangtechnika (Hungary) 1962, v. 8, no. 1, p. 17-18	687
Kernenergie (East Germany) 1963, v. 6, no. 4, p. 137-184	708
1963, v. 6, no. 5, p. 187-191, 193-238	708
Khimicheskaya Promyshlennost' (USSR) 1945, no. 3, p. 8-9	599
1954, no. 6, p. 336-338	647
1959, no. 5, p. 419-425	670
1961, no. 3, p. 190-196	642
1962, no. 11, p. 781-857	B-17
Khimicheskie Volokna (USSR) 1961, no. 3, p. 68	684
Khimiya i Primenenie Fosfororganicheskikh Soedinenii (Trudy Pervoi Konferentsii 8-10 Dek 55 G.) Moscow, 1957	633
Khimiya i Tekhnologiya Topliv i Masel (USSR) 1963, v. 8, no. 1, p. 19-24	646
Khirurgiya (USSR) 1963, v. 39, no. 5, p. 6-18, 25-29, 36-40, 77-80, 98-111, 118-121	629
Kinetika i Kataliz (USSR) 1962, v. 3, no. 5, p. 661-673	643
Klinicheskaya Meditsina (USSR) 1962, v. 40, no. 5, p. 77-85	619
1962, v. 40, no. 8, p. 123-127	615
1962, v. 40, no. 9, p. 67-71	617
1962, v. 40, no. 9, p. 75-81	623
1962, v. 40, no. 9, p. 129-135	714
K'o Hsüeh (China) 1933, v. 17, p. 1018-1048	674
Kbunshi Kagaku (Japan) 1962, v. 19, no. 203, p. 148-153	686
Kogyo Kagaku Zasshi (Japan) 1957, v. 60, no. 10, p. 1268-1271	712
1961, v. 64, no. 5, p. 787-791	638
1963, v. 66, no. 2, p. 246-249	642

Page	Journal
651	Kolloid-Zeitschrift (West Germany) 1949, v. 115, no. 1/3, p. 76-82
658	Kolloidnyi Zhurnal (USSR) 1958, v. 20, no. 4, p. 444-455
643	Kommunist, Erevan (USSR) 1963, 21 Feb, p. 2 1963, 28 Apr, p. 5 1963, 11 May, p. 2 1963, 17 May, p. 2; 26 May, p. 1; 28 May, p. 1
710 B-17	1963, 14 June, p. 3
664	Kommunist, Moscow, (USSR) 1962, v. 39, no. 14, p. 73-80
651	Kommunist Tadzhikistana (USSR) 1963, 19 May, p. 2
714	Komsomol'skaya Pravda (USSR) 1963, 5 May
700	Korroziya i Zashchita Konstruktsionnykh Metallicheskikh Materialov; Sbornik Statei, Moscow, 1961, 258p.
705	Krasnaya Zvezda (USSR) 1962, 15 Feb; 16 Mar; 22 Mar
642	Kunststoffe (West Germany) 1961, v. 51, no. 11, p. 698-702, 708
705	Kurorti SSSR, Moscow, 1962, p. 87-737
642	Kuznechno-Shtampovochnoe Proizvodstvo (USSR) 1963, v. 5, no. 1, p. 29-32
705 668	Laboratornoe Delo (USSR) 1962, v. 8, no. 7, p. 16-17
695 696 695 696 694	Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1961, no. 3, p. 20-25 1962, no. 6, p. 20-23 1962, no. 6, p. 52-53 1962, no. 6, p. 54-56 1963, no. 1, p. 72
645 639	Legkaya Promyshlennost' (USSR) 1955, v. 15, no. 9, p. 43-44
691 691	Leningrad (USSR) 1963, 4 June, p. 2
669 703 717 717	Leningrad U. Uchenye Zapiski (USSR) 1954, no. 175, p. 21-35
687	Leninskaya Smena (USSR) 1963, 18 May, p. 63
708 708	Leninskoe Znamya (USSR) 1963, 19 Feb, p. 2 1963, 27 Apr,
599 647 670 642 B-17	1963, 2 June, p. 2; 5 June, p. 4 1963, 12 June, p. 1-3
684	Lijecnicki Vjesnik (Yugoslavia) 1962, v. 84, no. 2, p. 131-180 1962, v. 84, no. 4, p. 323-371
633	Magyar Kemiai Folyoirat (Hungary) 1959, v. 65, no. 7, p. 280-281
646	Magyar Tudonamyos Akademia. Akademiai Kozlony (Hungary) 1963, v. 12, no. 4, p. 29-32
629	Mashinny Perevod; Prikladnaya Lingvistika (USSR) 1962, no. 7, p. 3-87, 102-110
643	Mashinostroenie (USSR) 1963, no. 2, p. 6 1963, no. 3, p. 88-90, 93-94
619 615 617 623 [illegible]	Mashinostroitel' (USSR) 1963, no. 3, p. 95-98, 103-106 1963, no. 4, p. 16-17, 32, 39 1963, no. 5, p. 7 1963, no. 5, p. 11, 20 1963, no. 5, p. 20 1963, no. 5, p. 22 1963, no. 5, p. 22
674	Materialy po Geologii Tsentral'nogo Kazakhstana (USSR) 1960, v. 1, p. 9-26
686	Max Planck Institut für Eisenforschung (West Germany) Communication-657
712 638 642	Mechanika (Poland) 1962, no. 5, p. 3-81
	Meditsinskaya Parazitologiya i Parazitarnye Bolezni (USSR) 1960, v. 29, no. 2, p. 179-183
	Meditsinskaya Promyshlennost' (USSR) 1963, v. 17, no. 4, p. 3-6
	Medizinische Klinik (West Germany) 1962, v. 57, p. 1016-1017
	die Medizinische Welt (West Germany) 1962, no. 33, p. 1714
	Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1963, v. 17, no. 4 1963, v. 17, no. 4, p. 56

Page	Journal
648	Memorial des Poudres (France) 1955, v. 37, p. 413-416
649	Metallgesellschaft A. G., Frankfurt a.M. (West Germany) 18 May 62
665 675 717	Metallovedenie i Termicheskaya Obrabotka Metallov (USSR) 1962, no. 9, p. 20-22 1962, no. 10, p. 5-8
703 602	la Metallurgia Italiana, 1958, v. 50, p. 173-180
714	Metaux (France) 1957, v. 32, no. 379, p. 122-131
716	Meteorologiya i Gidrologiya (USSR) 1961, no. 3, p. 3-10 1963, no. 5, p. 3-13, 22-27, 29-31,
667	38-50, 56-59, 61-63 1963, no. 7, p. 3-17, 28-33, 40-50, 58-61, 64
B-17	Mikrobiologiya (USSR) 1954, v. 23, no. 1, p. 49-52
601	1957, v. 26, nos. 1-6 1958, v. 27, nos. 1-6
691	1959-61, v. 28-30 1962, v. 31, no. 1, p. 111-120, 189-191
615	1962, v. 31, no. 2, p. 199-202 1963, v. 32, no. 1, p. 33-38, 121-216, 128-135
701	Minerva Anestesiologica (Italy) 1960, v. 26, p. 277-284
603	Minerva Medica (Italy) 1961, v. 52, p. 631-634
661 685 685 685 685	Ministerstvo Vysshego i Srednogo Spetsial'nogo Obrazovaniya. Byulleten' (USSR) 1962, no. 8, p. 15-17 1962, no. 12, p. 12-19 1963, no. 1, p. 3-5 1963, no. 1, p. 5-6
682	1963, no. 3, p. 1-2, 12-13
717	1963, no. 3, p. 13-18 1963, no. 4, p. 13-31
702	Molod' Ukrainy (USSR) 1963, 24 Apr, p.2; 7 May, p. 1 1963, 14 May, p. 3
679	1963, 18 May, p. 3
678 597 717 716	Monatshefte für Chemie (Austria) 1928, v. 49, p. 283-315 Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten', Otdel Biologicheskii (USSR) 1962, v. 37(67) no. 3, p. 138-139
612 612	die Mühle (West Germany) 1957, v. 94, no. 42, p. 539-540
646	Na Stroikakh Rossii (USSR) 1963, no. 4, p. 1, 2 (excerpt). 7
717	Nachrichtentechnik (German Democratic Republic) 1961, v. 11, no. 9, p. 422-425
714	Narodnoe Khozyaistvo Kazakhstana (USSR) 1963, v. 21, no. 1, p. 74-75; 1963, v. 21, no. 2, p. 4-7, 9, 12
675 674 598 675 597 674 698 597 669	die Naturwissenschaften (West Germany) 1962, v. 49, no. 9, p. 201 1963, v. 50, no. 2, p. 41 1963, v. 50, no. 3, p. 90 Nauchno-Tekhnicheskie Obshchestva (USSR) 1963, v. 5, no. 4, p. 17-18, 29-32 Nauchnye Doklady Vysshei Shkoly. Biologicheskie Nauki (USSR) 1961, no. 4, p. 29-33
655	Nauchnye Doklady Vysshei Shkoly. Filologicheskie Nauki (USSR) 1963, no. 1, p. 157-158
695	Nauchnye Doklady Vysshei Skholy. Filosofskie Nauki (USSR) 1963, v. 6, no. 1, p. 58-65
B-18	1963, v. 6, no. 1, p. 151-159
615	Nauchnyi Institut po Udobreniyam i Insekto-Fungisidam. Trudy (USSR) 1940, no. 153, p. 228-241
620	Nauka i Tekhnika (USSR) 1963, no. 2, p. 38
624	Nauka i Zhyttya (USSR) 1963, v. 13, no. 1, p. 29-31, 34-35
623	Nedelya (USSR) 1963, no. 20, p. 5 1963, no. 20, 12-18 May, p. 8-9
675 676	Neftekhimiya (USSR) 1962, v. 2, no. 5, p. 793-794

Page	Journal
671	Neftepererabotka, Kiev, 1962, p. 48-57
707	Neftyanoe Khozyaistvo (USSR) 1930, v. 18, no. 2, p. 260-261 1958, v. 36, no. 2, p. 13-18 1960, v. 38, no. 4, p. 14-20
696 702	Nepreryvnaya Razlivka Stali, Moscow, 1956, p. 252-260 Neue Hütte (East Germany) 1962, v. 7, no. 4, p. 206-213
697	1962, v. 7, no. 11, p. 658-664
705	1963, v. 8, no. 1, p. 31-35 Neues Jahrbuch für Mineralogie. Monatshefte (West Germany) 1959, Apr, p. 85-92
652	Nihon Kagaku Zasshi (Japan) 1961, v. 82, no. 12, p. 1672-1675
B-17	Nihon Shashin Gakkai Kaishi (Japan) 1961, v. 24, no. 1, p. 36-40
657 609 609 609	NTZ; Nachrichtentechnische Zeitschrift (West Germany) 1952, v. 5, no. 10, p. 456-467 1952, v. 5, no. 12, p. 545-550 Ogneupory (USSR) 1962, v. 27, no. 5, p. 223-225
610 611	Okeanologiya (USSR) 1963, v. 3, no. 2, p. 308-312
682	Okis' Berilliya Svoistva i Primenenie, Moscow, 1962, 238p.
613	Organisation für die Zusammenarbeit der Eisenbahnen. Zeitschrift
613	(Poland) 1963, no. 1, p. 18-20 1963, no. 2, p. 20-22
714 715 714 715 714 714 715	Ortopediya, Travmatologiya i Protezirovanie (USSR) 1963, v. 24, no. 4, p. 49-66 Osnovy Pirotekhniki, Moscow, 1954, 248p. Osnovy Radiolakatsii, Moscow, 1961, 384p. Oyo Butsuri (Japan) 1962, v. 31, no. 9, p. 730-738
659 676 659	Paperi ja Puu (Finland) 1962, v. 44, no. 9, p. 439-446, 450-457
657	Partiinaya Zhizn' (USSR) 1963, no. 2, p. 28 1963, no. 9, p. 35-40
602 673	Patent (Austria) 5 196 24 417 add. 34 243 164 263
660	Patent (Belgium) 560 782 596 094 608 146
710	610 268 613 292 613 471
703 703	Patent (Denmark) 63 553
667 713 713 659 631	Patent (France) 470 392 669 100 683 946 717 232 725 864 929 874 1 093 096 1 224 158 1 251 365 1 298 157
715	Patent (East Germany) 24 170 24 672 24 896
714 600 652 669 699 699 653 642	Patent (Germany) 108 053 195 523 344 450 622 648 649 659 649 831 710 048 714 456 718 510 723 222, add. 726 949 744 862 950 780 953 068

Journal	Page
Patent (Germany) (con.)	
1 016 654	673
1 028 741	650
1 097 963	639
Patent (Italy)	
417 939	673
537 229	688
546 404	607
Patent (Japan)	
93 949, add.	639
100 964	639
206 998	599
255 539	690
Patent (Japan) pub.	
27-814	685
27-3 211	663
28-609	684
34-5 669	661
35-12 753	689
35-13 221	681
35-15 247	689
36-20 376	684
37-38	643
37-824	662
37-3194	686
37-3 471	689
37-5 561	681
37-5 749	689
37-6 132	681
37-7 880	688
37-8 803	696
37-9 337	690
37-11 523	689
37-11 802	661
37-12 255	642
37-13 795	689
37-13 893	690
37-14 421	684
37-14 634	688
37-14 641	688
37-15 042	689
38-831	681
Patent (Netherlands)	
65 772	647
Patent (Switzerland)	
266 379	641
Patent (U. S.)	
12 635/51	599
Patent (USSR)	
107 200	639
112 923	646
Patent application (Germany)	
A 36 672	686
A 37 156	686
I 77 296	641
Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) 1963, v. 7, no. 2, p. 9-14, 58-62, 68-71	612
Pervichnye Protsessy Luchsvogo Porazheniya, Moscow, 1962, 96p.	B-18
Physica (Netherlands) 1934, v. 1, p. 273-280	710
Pitture e Vernici (Italy) 1962, v. 38, June, p. 203-212	686
Plasticheskie Massy (USSR) 1960, no. 5, p. 22-25	688
Pogloshchenie Gazov Aktivnymi Metallami, Moscow/Leningrad, 1961, p. 157-173	648
Polimery Tworzywa Wielkoczasteczkowe (Poland) 1963, v. 8, no. 1, p. 1-3	688
Politechnika Lodz. Zeszyty Naukowe (Poland) 1961, no. 35, Wlokiennictwo, no. 7, p. 3-44	678
Poluchenie Izdelii iz Zhidkikh Metallov s Uskorennoi Kristallizatsiei, Moscow, 1961, p. 5-11	696
Polyarnyi Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii. Trudy (USSR) 1960, v. 12, p. 5-70	630
Poroshkovaya Metallurgiya (USSR) 1963, v. 3, no. 1, p. 3-12, 93-111	694
Pravda, Leningrad (USSR) 1962, 16 Dec, p. 2	676
1963, 9 Feb, p. 4	669
1963, 21 Feb, p. 2	678
1963, 22 Feb, p. 4	665
1963, 28 Feb, p. 2	669
1963, 11 May	667
Pravda, Moscow (USSR) 1963, 29 Jan, p. 2	716
1963, 12 Feb, p. 2	669
1963, 20 Feb, p. 3-4	678
1963, 31 Mar	676
1963, 4 Apr, p. 2; 7 Apr, p. 2; 13 Apr, p. 4	660
1963, 7 May, 15 May	679
1963, 25 May, p. 3	703
1963, 31 May, p. 2	717
1963, 2 June, p. 2	716
1963, 7 June, p. 2	717
Pravda Ukrainy (USSR) 1963, 8 Feb, p. 2	669
1963, 18 Apr	675
1963, 4 June, p. 3	716
1963, 11 June, p. 2	703
Pravda Vostoka (USSR) 1963, 21 Feb, p. 3	665
1963, 19 May, p. 1	716
la Presse Médicale (France) 1961, v. 69, no. 24, p. 1079-1081	621
1962, v. 70, 29 Dec, p. 2833-2826	620
Prikladnaya Geofizika (USSR) 1961, no. 31, p. 230-247	652
1962, no. 32, p. 142-154	658
Prikladnaya Matematika i Mekhanika (USSR) 1950, v. 14, no. 1, p. 93-98	693
Primenenie Dizel'nykh Masel s Prisadkami, Leningrad, 1962, 112p.	B-17
Primenenie Rentgenovykh Luchei k Issledovaniyu Materialov, Leningrad U., 1959, 125p. (Trudy no. 28)	B-17
Priroda (Bulgaria) 1963, v. 12, no. 1, p. 4-6	601
Priroda (USSR) 1953, v. 42, no. 2, p. 107-110	632
1958, v. 47, no. 7, p. 107-108	632
1963, v. 52, no. 5, p. 61-67	600
Privredni Pregled (Yugoslavia) 1963, v. 13, no. 24, p. 8	714
Problemy Endokrinologii i Gormonoterapii (USSR) 1963, v. 9, no. 3, p. 3-7	628
Problemy Gematologii i Perelivaniya Krovi (USSR) 1963, v. 8, no. 4, p. 9-15, 19-22, 47-51	602
1963, v. 8, no. 5, p. 3-37, 47-52	602
Problemy Kibernetiki (USSR) 1963, no. 8, p. 253-291	715
Promyshlennaya Energetika (USSR) 1963, v. 18, no. 5, p. 53, 60	664
Promyshlennost' Armenii (USSR) 1963, v. 6, no. 2, p. 55-59	676
1963, v. 6, no. 2, p. 72	675
1963, v. 6, no. 3, p. 3-6	716
1963, v. 6, no. 3, p. 15-16	698
1963, v. 6, no. 3, p. 72	676
Prezeglad Elektroniki (Poland) 1962, v. 3, no. 3, p. 145	687
Przemysl Chemiczny (Poland) 1927, v. 11, p. 146-182	663
1934, v. 18, p. 458-464	662
1934, v. 18, p. 464-470	662
1935, v. 19, p. 122-125	663
Rabochaya Gazeta (USSR) 1962, 4 Oct, p. 4	670
1962, 7 Dec (excerpt)	716
1963, 10 May, p. 1	665
1963, 25 May, p. 2	598
1963, 25 May, p. 2	716
Radiatsionnaya Biokhimiya, Moscow, 1962, 333p.	B-17
Radio, Moscow (USSR) 1963, no. 5, p. 2, 7-9, 29-32	677
Radioaktivnye Izotopy i Yadernye Izlucheniya v Narodnom Khozyaistve SSSR, Riga, 1960, p. 206-210	663
Radiobiologiya (USSR) 1962, v. 2, no. 1, p. 1-176	626
1962, v. 2, no. 3, p. 337-511	626
1962, v. 2, no. 3, p. 442-449	627
1963, v. 3, no. 3	B-17
Radiokhimiya (USSR) 1961, v. 3, p. 211-218	635
Radiotekhnika (USSR) 1963, v. 18, no. 5, p. 66-71	601
Radyans'ka Ukrayina (USSR) 1963, 17 Apr, p. 3; 24 Apr, p. 2; 7 May, p. 1; 14 May, p. 3; 19 May, p. 2	698
Rassegna Internazionale di Clinica e Terapia (Italy) 1950, v. 30, 30 Nov, p. 641-643	618
Rechnoi Transport (USSR) 1961, v. 20, no. 12, p. 29	680
Recueil des Travaux Chimiques des Pays-Bas (Netherlands) 1936, v. 55, p. 1000-1006	644
Referativnyi Zhurnal. Biologiya (USSR) 1962, no. 1-3, 6, 12, 18-19	601
1963, no. 3	601
Referativnyi Zhurnal. Gornoe Delo (USSR) 1962, no. 10, items 10B298-10B299	697
Referativnyi Zhurnal. Khimiya. Biologicheskaya Khimiya (USSR) 1963, no. 3	601
Referativnyi Zhurnal. Matematika (USSR) 1962, no. 12	692
Referativnyi Zhurnal. Metallurgiya (USSR) 1963, nos. 2, 4-5, 7-8	694
Referativnyi Zhurnal. Otdel'nyi Vypusk 59: Nauchnaya i Tekhnicheskaya Informatsiya (USSR) 1963, no. 1, p. 1-116	717
Referativnyi Zhurnal. Tekhnologiya Mashinostroeniya. B. Tekhnologiya i Oborudovanie Kuznechno-Shtampovochnogo Proizvodstva (USSR) 1963, no. 2, p. 47	697
Referativnyi Zhurnal. Voprosy Tekhnicheskogo Progressa i Organizatsiya Proizvodstva v. Mashinostroenie (USSR) 1963, no. 1, p. 8, 11-12	716
Revista Brasilera de Cirurgia, 1960, v. 39, no. 6, p. 518-522	613
Revista Medica de Costa Rica, 1962, v. 19, no. 334, p. 101-108	624
Revue d'Optique Théorique et Instrumentale (France) 1945, v. 24, no. 1/3, p. 1-10	708
Revue de l'Institut Français du Pétrole et Annales des Combustibles Liquides 1960, v. 15, no. 1, p. 3-68	656
Revue de Métallurgie (France) 1960, v. 57, no. 4, p. 337-346	680
1962, v. 59, no. 11, p. 815-931	701
1962, v. 59, no. 12, p. 1043-1054	701
1963, v. 60, no. 2, p. 105-113	695
Revue de Métallurgie. Memoires Scientifiques (France) 1962, v. 59, no. 6, p. 454-460	705
Revue de Pathologie Générale et de Physiologie Clinique (France) 1960, v. 60, p. 643-680	624
la Revue Lyonnaise de Médecine (France) 1961, v. 10, Nov, p. 1085-1093	624
Roczniki Chemii (Poland) 1957, v. 31, no. 3, p. 793-800	650
Rukovodstvo po Izucheniyu Vozrasta i Rosta Ryb, Moscow, 1959, 164p.	631
Rybnoe Khozyaistvo (USSR) 1959, v. 35, no. 7, p. 53-58	631
1961, v. 37, no. 1, p. 9-11	632
1961, v. 37, no. 9, p. 27-30	631
Sakharnaya Promyshlennost' (USSR) 1958, v. 32, no. 7, p. 12-17	674
Sbornik Dokladov na II Plenume Komissii po Rybokhozyaystvennomu Issledovaniyu Zapadnoi Chasti Tikhnogo Okeana, Moscow, 1962, p. 5-25	630
1962, p. 31-40	653
1962, p. 140-148, 160-169	630
1962, p. 235-245	599
Sbornik Prac o Tabaku Bratislava, 1955, p. 277-282	686
Schweizerische Medizinische Wochenschrift, 1962, v. 92, 20 Oct, p. 1295-1306	622
Sekko to Sekkai (Japan) 1963, no. 62, p. 21-26	712
Sel'skaya Zhizn (USSR) 1963, 22 May, p. 2, 25 May, p. 4	597
Sel'skii Mekhanizator (USSR) 1963, no. 4, p. 29	680
1963, no. 5, p. 22-23	679
Semaine des Hopitaux Thérapeutique (France) 1960, v. 36, no. 10, p. 909-912	620

Journal	Page
Semana Medica (Argentina)	
1962, v. 120, no. 20, p. 734-737	625
Sibirskii Matematicheskii Zhurnal (USSR)	
1963, v. 4, no. 2, p. 295-302	668
Sociedad Mexicana de Geografia y Estadistica. Boletin,	
1949, v. 68, July/Oct, p. 19-44	655
1949, v. 68, July/Oct, p. 45-62	656
Società Italiana di Biologia Sperimentale. Bollettino.	
1951, v. 27, p. 1233	616
Société Chimique de Belgique. Bulletin.	
1953, v. 62, p. 109-118	690
Société Chimique de France. Bulletin.	
1937, ser. 5, v. 4, p. 944-950	711
1944, ser. 5, v. 11, p. 2-6	638
1957, no. 2, p. 153-158	649
Société de Biologie et de ses Filiales. Comptes Rendus des Séances (France)	
1931, v. 106, no. 1, p. 1080-1081	616
1931, v. 106, no. 1, p. 1081-1084	616
Société de Chimie Biologique. Bulletin (France)	
1949, v. 31, p. 1297-1300	605
Société des Forges et Ateliers du Creusot, Paris (France) n.d.	697
Société Française de Minéralogie et de Cristallographie. Bulletin,	
1960, v. 83, p. 254-256	656
Sovetskaya Belorussiya (USSR)	
1963, 19 Feb, p. 2	678
1963, 17 May, p. 1	716
1963, 2 June, p. 2	716
1963, 9 June, p. 4	717
Sovetskaya Estoniya (USSR)	
1963, 2 June, p. 4	667
1963, 5 June, p. 2	716
Sovetskaya Geologiya (USSR)	
1962, no. 4, p. 9-10	697
Sovetskaya Kirgiziya (USSR)	
1963, 7 May	667
1963, 4 June	716
1963, 7 June, p. 2	703
Sovetskaya Latviya (Latvian, SSR)	
1963, 22 Feb, p. 2	669
1963, 28 Apr, p. 4	675
1963, 16 May, p. 2	679
1963, 6 June, p. 2	717
Sovetskaya Litva (Lithuanian SSR)	
1963, 25 Jan, p. 1	597
1963, 21 Feb, p. 3	678
1963, 22 Feb, p. 2	665
1963, 17 May, p. 2	716
1963, 4 June	716
1963, 7 June, p. 2	717
Sovetskaya Moldaviya (USSR)	
1963, 5 Mar	676
Sovetskaya Rossiya (USSR)	
1963, 1 June, p. 1; 2 June, p. 2	703
1963, 4 June	716
1963, 7 June, p. 1, 3	717
Sovetskie Rybokhozyaistvennye Issledovaniya v Moryakh Evropeiskogo Severa, Moscow,	
1960, p. 253-266	631
1960, p. 285-298	632
1960, p. 299-307	632
Sovetskoe Foto (USSR)	
1963, v. 23, no. 4, p. 37	715
Spechennyi Korund, Moscow,	
1961, 214p.	682
Spektral'noe Opredelenie Redkikh i Rasseyannykh Elementov, Moscow,	
1962, p. 204-238	711
Stahl und Eisen (Germany)	
1918, v. 38, 11 Apr, p. 316-317	638
1950, v. 70, no. 18, p. 765-767	697
1963, v. 83, no. 3, p. 154-162	702
1963, v. 83, no. 4, p. 213-219	702
1963, v. 83, no. 5, p. 290-298	696
1963, v. 83, no. 6, p. 317-327	701
Stal' (USSR)	
1958, v. 18, no. 2, p. 138-144	680
1963, v. 23, no. 4, p. 374-378	702
Stanki i Instrument (USSR)	
1963, v. 34, no. 5, p. 1-2	675
Stroitel'naya Gazeta (USSR)	
1963, 5 May, p. 1; 10 May, p. 1, 2; 12 May, p. 1	700
1963, 29 May, p. 2	716
Stroitel'nye i Dorozhnye Mashiny (USSR)	
1963, v. 8, no. 5, p. 18, 30-31	674
Sumarski List (Yugoslavia)	
1952, v. 76, no. 7, p. 229-239	608
Svarochnoe Proizvodstvo (USSR)	
1962, no. 12, p. 25-28	703
Svetotekhnika (USSR)	
1963, v. 9, no. 5, p. 19-24	676
il Tabacco (Italy)	
1959, v. 63, no. 692, p. 285-292	636
1961, v. 65, no. 699, p. 219-228	636
1961, v. 65, no. 699, p. 238-244	636
Tabak-Forschung (West Germany)	
1949, 53, nos. 1-10, n.p.	638
Technische Hochschule, Stuttgart. Forschungsinstitut für Kraftfahrwesen und Fahrzeugmotoren. Berichte (Germany)	
1942, v. 9, p. 109-121	683
Tekhnicheskii Progress v Chernoi Metallurgii SSSR: Prokatnoe i Trubnoe Proizvodstvo, Moscow,	
1962, p. 121-245	700
Tekhnologiya Keramiki i Ogneuporov, Moscow	
1962, p. 374-396, 400-409, 421-429	681
Tekstil'naya Promyshlennost' (USSR)	
1958, v. 18, no. 1, p. 25-27	684
1961, v. 21, no. 11, p. 35-41	683
1961, v. 21, no. 11, p. 41-46	684
1961, v. 21, no. 11, p. 72-76	684
Teoriya Kolebanii, Moscow,	
1958, 628p.	B-17
Terapevticheskii Arkhiv (USSR)	
1962, v. 34, no. 7, p. 72-78	616
1962, v. 34, no. 8, p. 46-52	614
1962, v. 34, no. 8, p. 109-113	624
1962, v. 34, no. 9, p. 45-53	625
1962, v. 34, no. 9, p. 95-99	621
Thrombosis et Diathesis Haemorrhagica (West Germany)	
1962, v. 7, no. 5/6, p. 444-456	610
Ti Chih Hsüeh Pao (Chinese People's Republic)	
1962, v. 42, no. 1, p. 1-14, 93-101	652
Ti Li (Chinese People's Republic)	
1961, no. 6, p. 250, 258-267, 280-281	653
1962, no. 4, p. 135-139, 148, 157-160	654
Tierärztliche Umschau (West Germany)	
1961, v. 16, no. 2, p. 46-48	623
Traktory i Sel'khozmashiny (USSR)	
1963, v. 33, no. 5, p. 4-5, 35, 37-39, 41	598
Tralovyi Lov Okunya v Beringovom More, Moscow,	
1961, 26p.	631
Trud, Moscow (USSR)	
1963, 15 Feb	669
1963, 1 Apr, p. 2	660
1963, 18 Apr	597
1963, 11 May, p. 3	710
1963, 6 June, p. 2	717
Trudy Opytno-Issledovatel'skogo Zavoda "Khimgaz" (USSR)	
1936, v. 3, p. 202-208	646
Trudy Soveshchanie po Dinamike Chislennosti Ryb,	
1960,	631
1960	632
Trudy Soveshchaniya po Probleme Akklimatizatsii Ryb i Kormovykh Bespozvonochnykh,	
1952	632
Trudy Soveshchaniya po Voprosam Vliyaniya Poverkhnostno-Aktivnykh Vestchestv na Elektrosazhdenie Metallov, Vilnyus, 17-19 May 56,	
1957	649
Tsitologiya (USSR)	
1962, v. 4, no. 3, p. 323-325	605
1963, v. 5, no. 2, p. 194-203	603
Tsvetnye Metally (USSR)	
1947, v. 20, no. 2, p. 23-25	695
Tung Ya Chi Feng Ti To Kan Wen T'i, Peiping,	
1962, 106p.	653
Turkmenskaya Iskra (USSR)	
1963, 7 Apr, p. 1	597
1963, 4 June, p. 3; 7 June, p. 2	717
Uchet i Finansy v Kolkhozakh i Sovkhozakh (USSR)	
1963, v. 20, no. 5, p. 46	676
Ukrainskii Khimicheskii Zhurnal (USSR)	
1954, v. 20, p. 343-349	636
1957, v. 23, no. 2, p. 236-238	637
Ukrainskii Khimicheskii Zhurnal (USSR) (con.)	
1961, v. 27, no. 3, p. 396-402	635
1962, v. 28	B-17
1962, v. 28, no. 6, p. 675-681	634
Ukrayins'kyi Botanichnyi Zhurnal (USSR)	
1962, v. 19, no. 6, p. 60-63	608
Ukrayins'kyi Fizychnyi Zhurnal (USSR)	
1960, v. 5, no. 3, p. 333-344	712
1962, v. 7	B-17
Ukrayins'kyi Naukovo-Doslidnyi Instytut Zakhystu Roslyn. Nauchnye Trudy (USSR)	
1959, v. 8, p. 5-15	600
die Umschau in Wissenschaft und Technik (West Germany)	
1959, v. 59, no. 23, p. 716-717	710
Universidad Naciona, Mexico, D. F. Instituto de Geologia. Anales	
1951, v. 10	655
Upravlenie Gazovym Potokom v Domennoi Pechi Programmnoi Zagruzkoi, Sverdlovsk,	
1960, pt. 2, chap. 2	695
Uspekhi Sovremennoi Biologii (USSR)	
1963, v. 55, no. 2, p. 219-238	628
Vechernaya Moskva (USSR)	
1963, 6 Apr, p. 1	700
Verbesserung der Sauren Hydrolyse (Arsatz der Amino-Gruppe durch Hydrozyl) in Schwefelsaurer Losung durch Zusatz von Phosphorsauren Slazen, n.p.,	
Apr, 36, 3p. (PB 75420)	643
Verein Deutscher Eisenhüttenleute (West Germany)	
Berichte-20	695
Berichte-54	697
Verfkroniek (Netherlands)	
1956, v. 29, no. 4, p. 108-110	685
Vestnik Elektropromyshlennosti (USSR)	
1963, v. 34, no. 5, p. 1-3, 66	666
Vestnik Protivovozdushnoi Oborony (USSR)	
1961, v. 36, no. 4, p. 24-27	670
1961, v. 36, no. 8, p. 79-80	670
Vestnik Rentgenologii i Radiologii (USSR)	
1962, v. 37, no. 1, p. 65-66	613
Vestnik Svyazi (USSR)	
1963, v. 23, no. 7(280)	B-17
Veterinariya (USSR)	
1962, v. 39, no. 2, p. 27-30	599
1962, v. 39, no. 4, p. 87-91	613
Vinodelie i Vinogradarstvo SSSR,	
1956, v. 16, no. 8, p. 27-31	608
Vliyanie Ioniziruyushchego Izlucheniya na Funktsiyu Vyshikh Otdelov Tsentral'noi Nervnoi Sistemy Potomstva, Moscow,	
1961	628
Vliyanye Ioniziruyushchikh Izluchenii na Tsentral'nuyu Nervnuyu Sistemu, Moscow,	
1962, p. 5-7, 84-113, 131	628
Vodosnabzhenie i Sanitarnaya Tekhnika (USSR)	
1962, no. 6, p. 12-15	671
Voprosy Ekonomiki (USSR)	
1963, no. 3, p. 15-25	663
Voprosy Ikhtiologii (USSR)	
1962, no. 1(22), p. 3-17, 104-105, 116-126, 169-173, 192-196	630
Voprosy Kurortologii, Fizioterapii i Lechebnoi Fizicheskoi Kul'tury (USSR)	
1963, v. 28, no. 2, p. 97-104, 135-139, 173-175, 177-178, 184-191	608
Voprosy Meditsinskoi Khimii (USSR)	
1962, v. 8, no. 3, p. 270-274	615
1962, v. 8, no. 3, p. 276-279	606
1962, v. 8, no. 4, p. 93-94	606
Voprosy Obshchego Elektropriborostroeniya, Kiev,	
1960, 264p.	B-17
Voprosy Onkologii (USSR)	
1955, v. 1, no. 5, p. 14-20	619
Voprosy Pitaniya (USSR)	
1962, v. 21, no. 3, p. 22-28	672
1962, v. 21, no. 3, p. 28-31	673
1962, v. 21, no. 3, p. 66-71	612
1962, v. 21, no. 4, p. 25-30	673
1962, v. 21, no. 4, p. 71-74	619
1963, v. 22, no. 3, p. 3-8, 51-55, 90-94	672

Journal	Page
Voprosy Virologii (USSR) 1961, v. 6, no. 6, p. 656-668	609
Vsesoyuznoe Khimicheskoe Obshchestvo. Zhurnal (USSR) 1961, v. 6, no. 3, p. 268-275	606
Vsesoyuznoe Nauchnoe Meteorologicheskoe Soveshchanie (no. 1) Leningrad. Trudy, v. 1, p. 13-26, 48-70, 81-112, 124-148, 173-180, Leningrad, 1962.	B-17
Vsesoyuznoe Obshchestvo po Rasprostraneniyu Politecheskikh i Nauchnykh Znanii. Seriya 8: Biologiya i Meditsina (USSR) 1963, no. 1, p. 47p.	B-18
Vsesoyuznoe Obshchestvo po Rasprostraneniyu Politicheskikh i Nauchnykh Znanii. Seriya 12 (USSR) 1963, no. 9, p. 7-16, 37-42	657
Vsesoyuznoe Soveshchanie po Radiatsionnoi Khimii (no. 2) Moscow, 1960. Trudy, Moscow, 1962, 756p.	B-17
Vsesoyuznyi Nauchno-Issledovatel'skii Institut Tabaka i Makhorki. Sbornik Nauchnoi Trudov (USSR) 1931, v. 81, p. 4-18	600
Vvedenie v Kvantovuiu Radiofiziku, Koevskogo Univ. 1963.	B-17
Vysokomolekylyarnye Soedineniya (USSR) 1962, v. 4, no. 7, p. 1049-1052	643
1962, v. 4, no. 8, p. 1186-1192	689
1962, v. 4, no. 8, p. 1214-1218	645
1962, v. 4, no. 8, p. 1219-1222	645
1962, v. 4, no. 11, p. 1688-1695	646
Vysshie Korkovye Funktsii Cheloveko, Moscow, 1962, p. 395-397, 430-432	611
Vyzhivaemost' i Indikatsiya Patogennykh Mikrobov vo Vnesknei Srede, Moscow, 1960, 348p.	B-18
Vzryznik (Blasting) Kiev, 1962, p. 94-117	658
Werkstoffe und Korrosion (West Germany) 1950, v. 1, no. 10, p. 400-404	685
Yunyi Tekhnik (USSR) 1961, v. 5, no. 3, p. 25-28	609
Zarya Vostoka (USSR) 1962, 18 Dec, p. 2	676
1963, 8 June, p. 2	675
Zdravookhranenie Belorussii (USSR) 1963, v. 9, no. 4, p. 71-72	629
Zdravookhranenie Turkmenistana (USSR) 1963, v. 7, no. 4, p. 3-6	604
Zeitschrift für Analytische Chemie (West Germany) 1962, v. 184, no. 5, p. 327-341	637
1962, v. 188, p. 341-344	637
Zeitschrift für Angewandte Geologie (East Germany) 1962, v. 8, p. 400-401	656
Zietschrift für Angewandte Mathematik und Mechanik (Germany) 1936, v. 16, no. 2, p. 73-78	693
Zeitschrift für Angewandte Mathematik und Physik (Switzerland) 1954, v. 5, p. 496-508	692
1955, v. 6, p. 387-401	692
1956	692
Zeitschrift für Anorganische und Allgemeine Chemie (Germany) 1933, v. 210, no. 2, p. 113-124	
Zeitschrift für Biologie (West Germany) 1960, v. 111, no. 5, p. 379-392	621
Zeitschrift für Erzbergbau und Metallhüttenwesen (West Germany) 1963, v. 16, no. 1, p. 18-21	701
Zeitschrift für Kristallographie (Germany) 1935, v. 92, p. 89-130	B-17
Zeitschrift für Naturforschung (West Germany) 1962, v. 17a, p. 1103-1111	711
Zeitschrift für Physikallsche Chemie, Leipzig (Germany) 1928, v. 138A, no. 1/2, p. 102-122	651
1932, v. 18B, p. 291-315	712
Zeitschrift für Technische Physik (Germany) 1929, v. 10, no. 4, p. 143-146	702
1934, v. 15, p. 257-262	710
Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten. Abt. 1. Originale (Germany) 1931, v. 121, p. 413-420	617
1934, v. 131, p. 1-6	617
Zheleznodorozhnyi Transport (USSR) 1962, v. 44, no. 4, p. 50-52	664
1962, v. 44, no. 5, p. 43-47	680
Zhurnal Analiticheskoi Khimii (USSR) 1961, v. 16, no. 6, p. 706-708	636
Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1940, v. 10, p. 1248-1256	648
1948, v. 18, no. 4, p. 392-401	706
1955, v. 29, no. 5, p. 702-703	709
Zhurnal Fizicheskoi Khimii (USSR) 1948, v. 22, no. 2, p. 157-160	651
1949, v. 23, no. 7, p. 861-862	649
1958, v. 32, no. 11, p. 2543-2549	648
1962, v. 36, no. 5, p. 1010-1015	647
Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1961, v. 32, no. 11, p. 26-29, 52-56	610
1962, v. 33, no. 1, p. 57-62	617
1962, v. 33, no. 2, p. 37-41	613
1962, v. 33, no. 2, p. 45-48	614
1962, v. 33, no. 3, p. 9-14, 18-27	610
1962, v. 33, no. 12, p. 112-114	611
1963, no. 2, p. 93-101	610
1963, no. 3, p. 55-58	610
1963, no. 4, p. 46-49, 57-71	609
Zhurnal Nauchnoi i Prikladnoi Fotografii i Kinematografii (USSR) 1961, v. 6, no. 4, p. 247-250	687
1962, v. 7, no. 1, p. 30-35	686
1962, v. 7, no. 2, p. 146-148	687
Zhurnal Neorganicheskoi Khimii (USSR) 1958, v. 3, no. 9, p. 2109-2112	640
Zhurnal Nevropatologii i Psikhiatrii (USSR) 1956, v. 56, no. 7, p. 567-570	622
1957, v. 57, no. 2, p. 214-219	623
1957, v. 57, no. 6, p. 761-767	621
1958, v. 58, no. 6, p. 703-704	611
1958, v. 59, p. 402-409	624
1960, v. 60, p. 220-223	625
1960, v. 60, p. 234-237	625
1960, v. 60, no. 5, p. 568-576	623
1960, v. 60, no. 5, p. 593-594	622
Zhurnal Obshchei Biologii (USSR) 1963, v. 24, no. 2, p. 81-97	601
Zhurnal Obshchei Khimii (USSR) 1936, v. 6, no. 1, p. 75-77	649
1936, v. 6, no. 10, p. 1418-1429	647
1939, v. 9, no. 9, p. 814-818	647
1942, v. 12, p. 112-122	661
1962, v. 32, no. 5, p. 1423-1427	644
1962, v. 32, no. 7, p. 2273-2278	641
Zhurnal Prikladnoi Khimii (USSR) 1940, v. 13, no. 1, p. 29-36	640
1943, v. 16, no. 7/8, p. 253-257	681
1944, v. 17, p. 381-393	600
1947, v. 20, no. 12, p. 1242-1247	662
1962, v. 35, no. 7, p. 1597-1601	642
1962, v. 35, no. 9, p. 2093-2099	704
Zhurnal Tekhnicheskoi Fiziki (USSR) 1960, v. 30, no. 12, p. 1485-1488	705
Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1961, v. 11, no. 6, p. 1134-1136	609
Znanie-Sila (USSR) 1963, v. 38, no. 3, p. 46-49	657
Zoologicheskii Zhurnal (USSR) 1951, v. 30, no. 2, p. 143-148	632
1956, v. 35, no. 11, p. 1747-1764	631
1963, v. 42, no. 4, p. 546-550, 618-620, 637-638	630

NUMBER INDEX

Number	Page
60-15455 see 62-11403	710
60-21635	608
61-11435	632
61-23712	600
61-31036	631
62-10090	710
62-11403	710
62-11621	709
62-11638	693
62-11763/2	612
62-11763/4	612
62-14556	652
62-14568	649
62-14899	682
62-16400	642
62-16439	678
62-16454	651
62-16597	711
62-16639	657
62-16662	705
62-16683	709
62-16968	715
62-16970	715
62-17662(K-H-10825)	605
62-18037	642
62-18257	709
62-18365	709
62-18643	710
62-18687	702
62-18912	668
62-18919	693
62-20374	686
62-20402	687
62-20404	687
62-20411	686
62-20417	686
62-22125(ATS-22P60P)	678
62-22149(ATS-32P61G)	701
62-22748(K-H-5389-c)	600
62-22768(K-H-6311-b)	686
62-22851(K-H-3517-a)	638
62-23459	609
62-23490	619
62-23688	615
62-24149	700
62-24225	680
62-24312	625
62-24313	625
62-24315	622
62-24318	623
62-24321	624
62-24326	611
62-24330	623
62-24332	621
62-24334	622
62-25064	632
62-32626	692
62-34227(ATS-95P61R)	661
63-10153	692
63-10154	692
63-10155	692
63-10212	682
63-10252	693
63-10491	620
63-10505	610
63-10506	610
63-10518	624
63-10779	692
63-10848	599
63-10905	624
63-10919	621
63-10920	625
63-10924	620
63-10932	623
63-10947	623
63-10952	641
63-10961	682
63-10969	702
63-10970	658
63-10981	646
63-11646	717
63-11647	600
63-11648(AEC-tr-5553)	628
63-11649(AEC-tr-5428)	626
63-11650(AEC-tr-5430)	626
63-11651	670
63-11656	682
63-11657	663
63-11658	681
63-11659	648
63-11660	608
63-11661	711
63-13015	614
63-13937(AEC-tr-4840)	635
63-13938(AEC-tr-4903)	606
63-14023	662
63-14028	663
63-14030	600
63-14040	691
63-14046	705
63-14078	705
63-14082	637
63-14084	645
63-14087	683
63-14101	657
63-14118	644
63-14123	642
63-14130	650
63-14136	646
63-14141	661
63-14145	644
63-14151	634
63-14202	690
63-14203	690
63-14208	690
63-14209	695
63-14219	634
63-14220	634
63-14221	634
63-14222	638
63-14229	690
63-14232	711
63-14240	661
63-14241	661
63-14242	661
63-14244	638
63-14245	663
63-14247	691
63-14248	635
63-14293	683
63-14310	641
63-14348	641
63-14366	671
63-14369	638
63-1437[illegible]	635
63-14385	634
63-14387	624
63-14394	637
63-14395	622
63-14397	691
63-14403	645
63-14406	668
63-14409	623
63-14418	691
63-14435	697
63-14444	713
63-14446	637
63-14453	710
63-14454	713
63-14456	712
63-14457	710
63-14460	710
63-14463	634
63-14464	648
63-14465	713
63-14477	687
63-14513	647
63-14516	649
63-14523	639
63-14526	639
63-14527	639
63-14528	640
63-14529	663
63-14541	641
63-14543	642
63-14544	695
63-14550	605
63-14556	692
63-14564	606
63-14570	599
63-14595	645
63-14597	663
63-14598	646
63-14600	638
63-14602	646
63-14607	652
63-14609	640
63-14613	606
63-14626	599
63-14640	600
63-14650	674
63-14657	708
63-14705	642
63-14706	637
63-14709	649
63-14721	622
63-14739	664
63-14746	638
63-14750	646
63-14768	605
63-14770	613
63-14775	672
63-14777	674
63-14778	681
63-14790	607
63-14791	688
63-14792	650
63-14796	672
63-14800	616
63-14808	643
63-14809	641
63-14810	691
63-14814	703
63-14817	705
63-14819	704
63-14821	662
63-14823	683
63-14825	639
63-14831	662
63-14832	617
63-14840	643
63-14847	649
63-14850	616
63-14851	616
63-14852	617
63-14885	617
63-14934	674
63-14936	661
63-14940	639
63-14941	673
63-14944	672
63-14945	673
63-14947	672
63-14960	673
63-14965	643
63-14977	673
63-14985	672
63-14987	672
63-15031(UCRL Trans-696)	607
63-15076(EURAEC-342)	697
63-15207	631
63-15208	632
63-15209	632
63-15246	649
63-15265	683
63-15307	684
63-15456	650
63-15473	640
63-15481	636
63-15490	705
63-15504	637
63-15636(EURAEC-343)	697
63-15637(EURAEC-364)	635
63-15642(EURAEC-276)	706
63-15644(EURAEC-362)	706
63-15647(EURAEC-360)	706
63-15650(EURAEC-361)	706
63-15659(EURAEC-365)	707
63-15667	604
63-15668	606
63-15736(EURAEC-354)	707
63-15758	633
63-15799(AEC-tr-5528)	670
63-15815(EURAEC-24)	707
63-15894(UCRL Trans-870)	611
63-15907	693
63-15954	671
63-15973	684
63-15983	606
63-15985	618
63-15986	613
63-15987	616
63-15988	673
63-15989	619
63-15992	604
63-15993	622
63-15994	605
63-15997	614
63-15999	618
63-16012	683
63-16027	643
63-16036	649
63-16037	661
63-16041	651
63-16093	638
63-16103	662
63-16104	662
63-16109	663
63-16137	681
63-16157	704
63-16158	636
63-16175	639
63-16178	656
63-16179	656
63-16180	656
63-16181	655
63-16182	655
63-16184	644
63-16185	644
63-16215	655
63-16232	701
63-16241	656
63-16258	647
63-16264	654
63-16265	655
63-16306	620
63-16316	681
63-16324	683
63-16326	664
63-16345	620
63-16346	624
63-16377	674
63-16378	638
63-16380	645
63-16388	701
63-16398	662
63-16411	639
63-16422	671
63-16428	616
63-16430	641
63-16441	662
63-16450	686
63-16468	664
63-16471	680
63-16474	648
63-16510	621
63-16527	622
63-16537	702
63-16542	624
63-16545	656
63-16550	712
63-16551	656
63-16572	636
63-16573	636
63-16574	636
63-16575	613
63-16585	613
63-16586	618
63-16590	621
63-16617	599
63-16723	606
63-16724	606
63-16745	712
63-16825	697
63-16831	685
63-16840	696
63-16845	695
63-16863	702
63-16871	651
63-16977	688
63-16978	684
63-17321(ATS-25Q68G)	711
63-17334(ATS-51Q68R)	658
63-17342(ATS-02Q68P)	650
63-17417(BGIRA-555)	693
63-17460(ATS-95Q67R)	658
63-17461(ATS-84Q68R)	689
63-17464(ATS-86Q68R)	645
63-17465(ATS-85Q68R)	645
63-17468(ATS-65Q67R)	646
63-17479(ATS-67Q69R)	644
63-17484(ATS-13Q67R)	643
63-17620(BISI-3182)	701
63-17621(BISI-3192)	694
63-17623(BISI-3240)	705
63-17624(BISI-3250)	695

Number	Page
63-17626(BISI-2998)	697
63-17627(BISI-3152)	696
63-17628(BISI-3209)	702
63-17630(BISI-3238)	680
63-17632(BISI-3260)	713
63-17699(BISI-3035)	694
63-17700(BISI-3168)	696
63-17701(BISI-3171)	695
63-17702(BISI-3223)	705
63-17703(BISI-3225)	695
63-17704(BISI-3229)	701
63-17705(BISI-3247)	711
63-17706(BISI-3281)	637
63-17707(BISI-3283)	695
63-17709(BISI-3206)	678
63-17710(BISI-3212)	696
63-17711(BISI-3216)	696
63-17712(BISI-3286)	701
63-17727(ATS-90Q69])	687
63-17728(ATS-88Q68])	711
63-17729(ATS-94Q69])	687
63-17731(ATS-11Q70R)	647
63-17733(ATS-27Q70H)	687
63-17734(ATS-55Q69R)	642
63-17735(ATS-10Q70F)	709
63-17736(ATS-82Q69F)	688
63-17740(ATS-35Q70G)	664
63-17741(ATS-44Q69FN)	691
63-17743(ATS-73Q70F)	650
63-17745(ATS-07Q70R)	641
63-17748(ATS-12Q70R)	684
63-17749(ATS-80Q69])	685
63-17751(ATS-79Q69])	684
63-17752(ATS-64Q69])	712
63-17755(ATS-18Q70H)	646
63-17759(ATS-22Q70])	689
63-17762(ATS-83Q69R)	652
63-17763(ATS-03Q70R)	654
63-17766(ATS-19Q70DU)	685
63-17772(ATS-88Q69])	651
63-17774(ATS-73Q69])	712
63-17776(ATS-21Q70R)	642
63-17777(ATS-34Q70P)	687
63-17778(ATS-60Q69R)	703
63-17779(ATS-58Q70R)	643
63-17780(ATS-95Q69])	642
63-17781(ATS-29Q69])	686
63-17782(ATS-38Q69R)	646
63-17783(ATS-47Q69R)	645
63-17795(BISI-3023)	696
63-17797(BISI-3022)	695
63-17808(TTIS NS-83)	645
63-17813(TTIS NS-108)	685
63-17816(TTIS NS-90)	684
63-17818(TTIS NS-101)	686
63-17819(TTIS NS-105)	648
63-17821(TTIS NS-103)	685
63-17822(TTIS NS-104)	685
63-17823(TTIS NS-106)	685
63-17824(TTIS NS-107)	685
63-17825(BISI-3241)	701
63-17828(BISI-3267)	701
63-17829(BISI-3276)	700
63-17832(BISI-3291)	695
63-1783+(BISI-3195)	702
63-17835(BISI-3198)	702
63-17839(BISI-3285)	695
63-17842(BISI-3309)	700
63-17843(NRCC C-4456)	691
63-17844(NRCC C-4462)	646
63-17845(NRCC C-4455)	631
63-17846(NRCC C-4451)	631
63-17847(NRCC C-4439)	630
63-17848(NRCC C-4466)	632
63-17849(NRCC C-4450)	631
63-17850(NRCC C-4460)	632
63-17851(NRCC C-4443)	631
63-17852(NRCC C-4458)	632
63-17853(NRCC C-4446)	631
63-17854(NRCC C-4447)	631
63-17855(NRCC C-4448)	657
63-17856(NRCC C-4464)	706
63-17857(NRCC C-4459)	607
63-17858(NRCC C-4457)	709
63-17896(SA Code-P-167)	681
63-17897(SA Code-P-168)	689
63-17898(SA Code-P-169)	689
63-17899(SA Code-P-170)	681
63-17925(SA Code-P-141)	642
63-17935(SA Code-P-151)	661
63-17936(SA Code-P-152)	661
63-17937(SA Code-P-153)	690
63-17938(SA Code-P-154)	689
63-17939(SA Code-P-155)	663
63-17940(SA Code-P-156)	684
63-17941(SA Code-P-157)	639
63-17942(SA Code-P-158)	689
63-17943(SA Code-P-159)	696
63-17944(SA Code-P-160)	688
63-17945(SA Code-P-112)	690
63-17946(SA Code-P-113)	681
63-17947(SA Code-P-114)	643
63-17948(SA Code-P-115)	689
63-17949(SA Code-P-116)	690
63-17950(SA Code-P-117)	689
63-17951(SA Code-P-118)	595
63-17952(SA Code-P-119)	684
63-17955(SA Code-P-120)	688
63-17954(SA Code-P-121)	688
63-18001	713
63-18010	650
63-18021	683
63-18024	638
63-18044	647
63-18045	647
63-18054	650
63-18072	687
63-18084	668
63-18087	667
63-18413	647
63-18417	642
63-18418	648
63-18430	644
63-19002	612
63-19003	618
63-19004	603
63-19005	617
63-19006	613
63-19009	614
63-19011	604
63-19015	619
63-19016	613
63-19018	599
63-19020	603
63-19021	672
63-19022	673
63-19023	603
63-19024	619
63-19025	603
63-19026	616
63-19036	704
63-19144	635
63-19148	632
63-19150	608
63-19159	692
63-19174	670
63-19183	669
63-19187	712
63-19216	682
63-19253	627
63-19256	651
63-19312	713
63-19323	668
63-19331	608
63-19363	611
63-19368	615
63-19408	679
63-19434	658
63-19435	694
63-19479	694
63-19487	680
63-19488	693
63-19492	679
63-19520	670
63-19558	651
63-19577	682
63-19586	655
63-19649	671
63-19850	653
63-19921	696
63-21415	714
63-21525	697
63-21590	664
63-21601	716
63-23009	615
63-23012	623
63-23015	614
63-23017	614
63-23021	624
63-23023	625
63-23024	621
63-23027	617
63-23029	616
63-23152	670
63-23153-(1-6)	609
63-23154-(1-6)	609
63-23154-(28/1-30/6)	609
63-23210	696
63-23330	
(UCRL Trans-819 (L))	705
63-23376	691
63-23427-(112-141)	607
63-23428-(118-141)	605
63-23665	617
63-31066	668
63-31076	717
63-31018	657
63-31022	715
63-31038	708
63-31044	610
63-31048	654
63-31049	700
63-31050	667
63-31055	714
63-31056	630
63-31060	627
63-31061	688
63-31062	611
63-31082	664
63-31083	703
63-31085	630
63-31087	603
63-31089	630
63-31092	709
63-31094	717
63-31095	628
63-31097	664
63-31103	668
63-31109	704
63-31112	663
63-31113	715
63-31118	627
63-31120	702
63-31123	694
63-31124	653
63-31126	654
63-31127	601
63-31131	680
63-31134	654
63-31137	607
63-31139	653
63-31140	707
63-31141	665
63-31143	680
63-31144	716
63-31145	714
63-31146	600
63-31151	652
63-31152	708
63-31153	610
63-31155	658
63-31156	708
63-31157	601
63-31158	633
63-31161	715
63-31162	664
63-31165	692
63-31166	710
63-31167	602
63-31168	601
63-31169	675
63-31170	657
63-31171	665
63-31172	714
63-31173	659
62-31176	659
63-31177	659
63-31180	698
63-31181	669
63-31182	679
63-31183	653
63-31184	601
63-31187	640
63-31188	611
63-31189	601
63-31191	652
63-31192	653
63-31194	714
63-31196	666
63-31198	604
63-31199	600
63-31200	599
63-31203	676
63-31205	658
63-31206	655
63-31207	631
63-31208	653
63-31209	679
63-31210	714
63-31211	628
63-31212	708
63-31213	602
63-31214	628
63-31215	620
63-31216	659
63-31217	703
63-31218	630
63-31219	717
63-31221	698
63-31223	659
63-31224	676
63-31225	660
63-31226	597
63-31229	708
63-31231	597
63-31232	675
63-31233	669
63-31234	669
63-31237	608
63-31238	676
63-31239	715
63-31240	666
63-31241	629
63-31242	715
63-31243	601
63-31244	670
63-31245	629
63-31248	629
63-31249	715
63-31250	620
63-31253	660
63-31254	679
63-31255	664
63-31256	602
63-31257	654
63-31258	666
63-31259	597
63-31261	707
63-31262	660
63-31263	669
63-31264	674
63-31265	716
63-31266	698
63-31267	652
63-31268	629
63-31272	714
63-31274	615
63-31275	598
63-31276	598
63-31277	601
63-31279	610
63-31287	598
63-31288	675
63-31289	699
63-31293	674
63-31294	703
63-31296	598
63-31297	676
63-31301	699
63-31302	716
63-31303	676
63-31304	608
63-31306	630
63-31308	609
63-31312	716
63-31317	677
63-31318	717
63-31319	610
63-31322	717
63-31323	610
63-31324	677
63-31325	708
63-31326	601
63-31329	658
63-31330	667
63-31335	667
63-31337	677
63-31338	675
63-31343	694
63-31345	704
63-31346	602
63-31347	699
63-31348	678
63-31349	652
63-31355	602
63-31356	612
63-31357	609
63-31358	672
63-31360	700
63-31363	678
63-31367	628
63-31369	700
63-31370	671
AD-284 527	691
AD-298 210	693
AD-298 657	651

Number	Page	Number	Page	Number	Page	Number	Page
AD-298 779	668	BISI-3241	701	FRBC Trans-440	630	JPRS-19953	602
AD-299 622	658	BISI-3247	711	FRBC Trans-441	631	JPRS-19954	601
AD-299 637	669	BISI-3250	695	FRBC Trans-445	631	JPRS-19956	675
AD-299 655	712	BISI-3260	713	FTD-TT-62-912	682	JPRS-19957	665
AD-299 664	694	BISI-3267	701	FTD-TT-62-1087	670	JPRS-19966	714
AD-401 593	692	BISI-3276	700	FTD-TT-62-1215	668	JPRS-19967	659
AD-401 743	627	BISI-3281	637	FTD-TT-62-1519	680	JPRS-19970	666
AD-401 738	670	BISI-3283	695	FTD-TT-62-1557	693	JPRS-19971	659
AD-401 768	682	BISI-3285	695	FTD-TT-62-1764	648	JPRS-19981	716
AD-402 427	694	BISI-3286	701	FTD-TT-62-1785	694	JPRS-19983	698
AD-402 440	680	BISI-3291	695	FTD-TT-62-1807	669	JPRS-19986	669
AD-402 451	693	BISI-3309	700	FTD-TT-62-1823	692	JPRS-19987	679
AD-402 580	682	Boeing Trans-R57	712	FTD-TT-62-1902	651	JPRS-19993	653
AD-402 588	713	CEA-tr-R1521	640	FTD-TT-62-1930	663	JPRS-19994	601
AD-404 908	682	CEA-tr-R1532	705	FTD-TT-63-3	712	JPRS-19997	640
AEC-tr-4840	635	CEA-tr-R1619	636	FTD-TT-63-18	694	JPRS-19998	611
AEC-tr-4903	606	CEA-tr-R1676	637	FTD-TT-63-25	693	JPRS-19999	601
AEC-tr-5428	626	CEN R-1910	707	FTD-TT-63-84	713	JPRS-20001	652
AEC-tr-5430	626	CSIRO Trans-5872	683	FTD-TT-63-102	651	JPRS-20002	653
AEC-tr-5528	670	CSIRO Trans-5873	684	FTD-TT-63-104	681	JPRS-20006	714
AEC-tr-5553	628	CSIRO Trans-5874	684	FTD-TT-63-145	679	JPRS-20009	666
AFCRL-TN-60-133	710	CSIRO Trans-5907	608	FTD-TT-63-156	658	JPRS-20011	604
AID-P-63-44	682	CSIRO Trans-5980	632	FTD-TT-63-163	627	JPRS-20012	600
AID-P-63-59	682	CSIRO Trans-6171	635	FTD-TT-63-280	711	JPRS-20013	599
AID-P-63-79	670	DSIR NLL M. 3946	696	FTD-TT-63-291	608	JPRS-20020	676
APL/JHU TG 230-T353	670	DSIR NLL M. 3981	653	FTD-TT-63-296	670	JPRS-20026	658
ATS-02Q68P	650	DSIR NLL M. 4142	700	FTD-TT-63-298	679	JPRS-20027	655
ATS-03Q70R	654	DSIR NLL M. 4583	680	FTD-TT-63-349	696	JPRS-20030	631
ATS-07Q70R	641	DSIR NLL M. 10 003	631	FTD-TT-63-369	671	JPRS-20031	653
ATS-10Q70F	709	DSIR NLL M. 10 004	632	FTD-TT-63-421	608	JPRS-20035	679
ATS-11Q70R	647	DSIR NLL M. 10 005	632	GS-97(1-2)	655	JPRS-20036	714
ATS-12Q70R	684	ETR Chem-1	633	HMI EU-B-14	706	JPRS-20037	628
ATS-13Q67R	643	EURAEC-24	707	HMI EU-B-15	706	JPRS-20038	708
ATS-18Q70H	646	EURAEC-276	706	HMI EU-B-16	706	JPRS-20039	602
ATS-19Q70DU	685	EURAEC-342	697	JINR P-802	705	JPRS-20040	628
ATS-21Q70R	642	EURAEC-343	697	JPRS-12898	609	JPRS-20041	620
ATS-22P60P	678	EURAEC-354	707	JPRS-18337	696	JPRS-20042	659
ATS-22Q70J	689	EURAEC-360	706	JPRS-18583	697	JPRS-20047	703
ATS-25Q68G	711	EURAEC-361	706	JPRS-18732	664	JPRS-20049	630
ATS-27Q70H	687	EURAEC-362	706	JPRS-18761	716	JPRS-20050	717
ATS-29Q69J	686	EURAEC-364	635	JPRS-19624	657	JPRS-20053	698
ATS-32P61G	701	EURAEC-365	707	JPRS-19631	715	JPRS-20055	659
ATS-34Q70P	687	Farben-486	662	JPRS-19677	708	JPRS-20056	676
ATS-35Q70G	664	Farben Me-219	662	JPRS-19693	610	JPRS-20059	660
ATS-38Q69R	646	FASEB S-83-2	673	JPRS-19702	654	JPRS-20061	597
ATS-44Q69FN	691	FASEB S-88-2	616	JPRS-19703	700	JPRS-20064	708
ATS-47Q69R	645	FASEB S-89-2	613	JPRS-19704	667	JPRS-20058	597
ATS-51Q68R	658	FASEB S-92-2	618	JPRS-19710	714	JPRS-20069	675
ATS-55Q69R	642	FASEB S-96-2	615	JPRS-19711	630	JPRS-20070	669
ATS-58Q70R	643	FASEB S-97-2	606	JPRS-19718	627	JPRS-20079	669
ATS-60Q69R	703	FASEB S-106-2	619	JPRS-19719	688	JPRS-20085	608
ATS-64Q69J	712	FASEB S-116-2	604	JPRS-19720	611	JPRS-20090	676
ATS-65Q67R	646	FASEB S-117-2	622	JPRS-19726	668	JPRS-20091	715
ATS-67Q69R	644	FASEB S-127-2	605	JPRS-19746	717	JPRS-20093	666
ATS-73Q69J	712	FASEB S-140-2	614	JPRS-19768	664	JPRS-20097	629
ATS-73Q70F	650	FASEB S-143-2	618	JPRS-19769	703	JPRS-20099	715
ATS-79Q69J	684	FASEB S-153-2	612	JPRS-19772	630	JPRS-20100	601
ATS-80Q69J	685	FASEB S-161-2	618	JPRS-19782	603	JPRS-20101	670
ATS-82Q69F	688	FASEB S-209-2	603	JPRS-19785	630	JPRS-20102	629
ATS-83Q69R	652	FASEB S-221-2	617	JPRS-19794	709	JPRS-20105	629
ATS-84Q68R	689	FASEB S-223-2	613	JPRS-19803	717	JPRS-20106	715
ATS-85Q68R	645	FASEB S-228 2	614	JPRS-19806	628	JPRS-20109	620
ATS-86Q68R	645	FASEB S-243-2	604	JPRS-19808	664	JPRS-20112	660
ATS-88Q68J	711	FASEB S-253-2	619	JPRS-19822	668	JPRS-20115	679
ATS-88Q69J	651	FASEB S-256-2	613	JPRS-19854	704	JPRS-20117	664
ATS-90Q69J	687	FASEB S-260-2	599	JPRS-19860	663	JPRS-20118	602
ATS-94Q69J	687	FASEB S-267-2	603	JPRS-19861	715	JPRS-20119	654
ATS-95P61R	661	FASEB S-290-2	615	JPRS-19866	627	JPRS-20122	666
ATS-95Q67R	658	FASEB S-292-2	617	JPRS-19868	702	JPRS-20123	597
ATS-95Q69J	642	FASEB S-293-2	623	JPRS-19871	694	JPRS-20129	707
ATS-RJ-109	644	FASEB S-297-2	614	JPRS-19875	653	JPRS-20130	660
BGIRA-555	693	FASEB S-300-2	614	JPRS-19877	654	JPRS-20131	669
BISI-609	700	FASEB S-304-2	624	JPRS-19878	601	JPRS-20132	674
BISI-1246	680	FASEB S-312-2	625	JPRS-19882	680	JPRS-20137	716
BISI-2998	697	FASEB S-313-2	621	JPRS-19887	654	JPRS-20144	698
BISI-3022	695	FASEB S-324-2	673	JPRS-19892	607	JPRS-20146	652
BISI-3023	696	FASEB S-329-2	617	JPRS-19896	653	JPRS-20147	629
BISI-3035	694	FASEB S-332-2	672	JPRS-19897	707	JPRS-20152	714
BISI-3152	696	FASEB S-338-2	603	JPRS-19900	665	JPRS-20154	615
BISI-3168	696	FASEB S-340-2	603	JPRS-19908	657	JPRS-20158	598
BISI-3171	695	FASEB S-356-2	619	JPRS-19912	680	JPRS-20161	598
BISI-3182	701	FASEB S-357-2	616	JPRS-19919	714	JPRS-20162	601
BISI-3192	694	FASEB S-361-2	611	JPRS-19921	600	JPRS-20164	610
BISI-3195	702	FASEB S-381-2	616	JPRS-19926	652	JPRS-20173	598
BISI-3198	702	FPRB Trans-147	691	JPRS-19927	708	JPRS-20177	675
BISI-3206	678	FPRB Trans-156	646	JPRS-19928	610	JPRS-20178	699
BISI-3209	702	FRBC Trans-403	631	JPRS-19930	658	JPRS-20185	674
BISI-3212	696	FRBC Trans-411	631	JPRS-19931	708	JPRS-20186	703
BISI-3216	696	FRBC Trans-414	631	JPRS-19932	601	JPRS-20188	598
BISI-3223	705	FRBC Trans-419	657	JPRS-19933	633	JPRS-20201	699
BISI-3225	695	FRBC Trans-422	632	JPRS-19939	715	JPRS-20202	716
BISI-3229	701	FRBC Trans-423	632	JPRS-19943	664	JPRS-20203	676
BISI-3238	680	FRBC Trans-438	632	JPRS-19947	692	JPRS-20204	608
BISI-3240	705	FRBC Trans-439	631	JPRS-19951	710	JPRS-20207	630

Number	Page	Number	Page	Number	Page	Number	Page
JPRS-20211	609	K-H-10825	605	PB 70 493D	702	SA Code-P-118	599
JPRS-20216	716	MDF K-202	710	PB 73 504	703	SA Code-P-119	684
JPRS-20225	677	MDF R-107	709	PB 73 504	705	SA Code-P-120	688
JPRS-20227	717	MDF V-122	693	PB 73 504B	682	SA Code-P-121	688
JPRS-20228	610	NASA N62-17002	691	PB 73 679	641	SA Code-P-141	642
JPRS-20233	717	NIH-1-49-63	606	PB 74 417C	658	SA Code-P-151	661
JPRS-20237	610	NIH-1-52-63	604	PB 75 420	643	SA Code-P-152	661
JPRS-20239	677	NIH-2-45-62	619	PB 91 098	638	SA Code-P-153	690
JPRS-20240	908	NIH-3-9-62	615	PB 95 601	662	SA Code-P-154	689
JPRS-20243	601	NIH-10-2-62	614	PL-480 HEW(62-11763/2)	612	SA Code-P-155	663
JPRS-20250	658	NRCC C-4439	630	PL-480 HEW(62-11763/4)	612	SA Code-P-156	684
JPRS-20252	667	NRCC C-4443	631	PL-480 Int(61-31036)	631	SA Code-P-157	639
JPRS-20260	667	NRCC C-4446	631	PL-480 AGR(60-21635)	608	SA Code-P-158	689
JPRS-20264	677	NRCC C-4447	631	PL-480 Smi (61-11435)		SA Code-P-159	696
JPRS-20269	675	NRCC C-4448	657	PL-480-PST-126	632	SA Code-P-160	688
JPRS-20277	694	NRCC C-4450	631	PSC-56-700	622	SA Code-P-167	681
JPRS-20281	704	NRCC C-4451	631	PSC-57-1588	621	SA Code-P-168	689
JPRS-20282	602	NRCC C-4455	631	PSC-57-1616	623	SA Code-P-169	689
JPRS-20283	699	NRCC C-4456	691	PSC-58-1594	611	SA Code-P-170	689
JPRS-20285	678	NRCC C-4457	709	PSC-59-1104	624	SLA AL-289	708
JPRS-20289	652	NRCC C-4458	632	PSC-60-1112	623	SLA R-2149	600
JPRS-20297	602	NRCC C-4459	607	PSC-60-1116	622	TTIS NS-83	645
JPRS-20298	612	NRCC C-4460	632	PSC-60-1453	625	TTIS NS-90	684
JPRS-20299	609	NRCC C-4462	646	PSC-60-1455	625	TTIS NS-101	686
JPRS-20301	672	NRCC C-4464	706	RAE Trans-1010	691	TTIS NS-103	685
JPRS-20304	700	NRCC C-4466	632	RT-1632	642	TTIS NS-104	685
JPRS-20311	678	NRCC TT-1074	709	RTS-2130	649	TTIS NS-105	648
JPRS-20317	628	NRCC TT-1077	607	RTS-2213	671	TTIS NS-106	685
JPRS-20323	700	NRCC TT-1080	706	SA Code-P-112	690	TTIS NS-107	685
JPRS-20327	671	NRL Trans-936	600	SA Code-P-113	681	TTIS NS-108	685
JPRS-21089	676	PB 603	643	SA Code-P-114	643	UCRL Trans-696	607
K-H-3517-a	638	PB 17 648	691	SA Code-P-115	689	UCRL Trans-819(L)	705
K-H-5389-c	600	PB 27 885	642	SA Code-P-116	690	UCRL Trans-870	611
K-H-6311-b	686	PB 33 755	641	SA Code-P-117	689	USASIA Trans-1151-A	692

4449 · 24

TRANSLATIONS IN PROCESS

[ALL-UNION CONFERENCE ON RADIATION CHEMISTRY] (NO. 2) MOSCOW, 1960.
Mono. Vsesoyuznoe Soveshchanie po Radiatsionnoi Khimii (no. 2) Moscow, 1960.
[Trudy] Moscow, 1962, 756p.

APPLICATION OF X-RAYS IN THE STUDY OF MATERIALS.
Mono. Primenenie Rentgenovykh Luchei k Issledovaniyu Materialov, Leningrad U., 1959, 125p. (Trudy no. 28)

CORROSION AND PROTECTION OF CONSTRUCTION METALS: COLLECTION OF ARTICLES.
Mono. Korroziya i Zashchita Konstruktsionnykh Metallicheskikh Materialov; Sbornik Statei, Moscow, 1961, 258p.

DATA ON STUDY OF FLORA AND VEGETATION OF THE URAL, NO. 1 (Materialy po Izucheniyu Flory i Raditel'nosti Urala, 1).
A[kademiya] N[auk] SSSR. Institut Biologii, Sverdlovsk. Trudy, 1962, no. 28, 135p.

FLUIDIZED BEDS ISSUE.
Khim[icheskaya] Prom[yshlennost'] (USSR) 1962, no. 11, p. 781-857.

HERALD OF COMMUNICATIONS, 1963 [VOL. 23] NO. 7 [280].
Vestnik Svyazi (USSR) 1963 [v. 23] no. 7 [280].

METEOROLOGY AND HYDROLOGY, 1963, NO. 7: SELECTED ARTICLES.
Meteorologiya i Gidrologiya (USSR) 1963, no. 7, p. 3-17, 28-33, 40-50, 58-61, 64.

[NEWS OF HIGHER EDUCATIONAL INSTITUTIONS, MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION USSR, RADIOPHYSICS SERIES] 1963, VOL. 6, NO. 2.
Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1963, v. 6, no. 2.

PROBLEMS OF GENERAL ELECTRICAL INSTRUMENT CONSTRUCTION.
Mono. Voprosy Obshchego Elektropriborostroeniya, Kiev, 1960, 264p.

RADIOBIOLOGY, 1963, VOL. 3, NO. 3
Radiobiologiya (USSR) 1963, v. 3, no. 3.

TRANSACTIONS OF MURMANSK INSTITUTE OF MARINE BIOLOGY, 1961, NO. 3(7).
[Akademiya Nauk SSSR]. Murmanskii Morskoi Biologicheskii Institut. Trudy, 1961, no. 3(7) p. 1-220.

UKRAINIAN JOURNAL OF CHEMISTRY, 1962, VOL. 28
Ukrainskii Khimicheskii Zhurnal (USSR) 1962, v. 28.

UKRAINIAN JOURNAL OF PHYSICS, 1962, VOL. 7.
Ukrayins'kyi Fizychnyi Zhurnal (USSR) 1962, v. 7.

Babakov, I. M.
THEORY OF VIBRATIONS.
Mono. Teoriya Kolebanii, Moscow, 1958, 628p.

Belyaev, R. A.
BERYLLIUM OXIDE: PROPERTIES AND APPLICATIONS.
Mono. Okis' Berilliya Svoistva i Primenenie, Moscow, 1962, 238p.

[Budyko, M. I., ed.].
[TRANSLATIONS OF THE ALL-UNION METEOROLOGICAL CONFERENCE (NO. 1) LENINGRAD, 1961]: SELECTED PARTS.
Mono. Vsesoyuznoe Nauchnoe Meteorologicheskoe Soveshchanie (no. 1) Leningrad. Trudy, v. 1, p. 13-26, 48-70, 81-112, 124-148, 173-180, Leningrad, 1962.

Deryugin, I. A.
INTRODUCTION TO QUANTUM RADIOPHYSICS.
Mono. Vvedenie v Kvantovuyu Radiofiziku, Kiev U., 1963.
Available from Holden-Day, Inc. Fall 1964.

Guter, R. S. and Ovchinskii, B. V.
ELEMENTS OF NUMERICAL ANALYSIS AND THEIR APPLICATIONS TO EXPERIMENTAL RESULTS.
Mono. Elementy Chislennogo Analiza i Matematicheskoi Obrabotki Rezultatov Opyta, Moscow, 1962.
Available from Holden-Day, Inc. Fall 1964.

Ivanov, A. V.
GREEN'S FUNCTIONS AND MATRICES IN OPERATOR THEORY.
Mono. Funktsii i Matritsy Grina v Operatsionnom Ischislenii, Minsk, 1963.
Available from Holden-Day, Inc. Fall 1964.

Kuzin, A. [M.].
RADIATION BIOCHEMISTRY.
Mono. Radiatsionnaya Biokhimiya, Moscow, 1962, 333p.

Leipunskii, A. I. and others.
OPERATING EXPERIENCE WITH BR-5 REACTOR.
Mono. I[nternational] A[tomic] E[nergy] A[gency] Conference on Operating Experience of Power Reactors, Vienna, June 63. [Proceedings] Paper CN-15/40.

Morozov, G. A.
USE OF DIESEL FUELS CONTAINING ADDITIVES.
Mono. Primenenie Dizel;nykh Masel s Prisadkami, Leningrad, 1962, 112p.

Papetrov, A.
INVESTIGATION CONCERNING DENDRITIC GROWTH BY CRYSTALLOGRAPHY.
Zeitschrift für Kristallographie (Germany) 1935, v. 92, p. 89-130.

Prezent, I. I., ed.
TRANSACTIONS OF THE INSTITUTE OF GENETICS, 1962, VOL. 29.
A[kademiya] N[auk] SSSR. Institute Genetiki. Trudy, 1962, v. 29, 471p.

Ruzhda, Z.
ELECTRIC RESISTIVE STRAIN GAGES.
Mono. Elektricheskie Tensometry Soprotivleniya, Moscow, 1961, 335p. (originally pub. in Czechoslovakian).

Sharai, V. N.
STUDY OF CRYSTALLIZATION IN GLASSES PRODUCED FROM EASILY MELTING CLAYS (Khimiya i Khimicheskaya Tekhnologiya Silikatnykh Materialov).
B[elorusskii] P[oliteknicheskii] I[nstitut]. Sbornik Nauchnykh Rabot (USSR) 1960, v. 82, p. 86-165.

Shevyakova, A. A, ed.
AUTOMATIC CONTROL OF AVIATION ENGINES, 1961, VOL. 3: SELECTED ARTICLES.
Avtomaticheskoe Regulirovanie Aviadvigatelei (USSR) 1961, v. 3, p. 1-32, 51-135.

Shevyakova, A. A., ed.
AUTOMATIC CONTROL OF AVIATION ENGINES, 1962, VOL. 4: SELECTED ARTICLES.
Avtomaticheskoe Regulirovanie Aviadvigatelei (USSR) 1962, v. 4, p. 5-69, 95-135.

Shidlovskii, A. A.
PYROTECHNICS.
Mono. Osnovy Pirotekhniki, Moscow, 1954, 248p.

Sitenko, A. G.
ELECTRO-MAGNETIC FLUCTUATION IN A PLASMA.
Mono. Elektromagnitnye Fluktuatsii v Plazme.
Khar'kov U., 1963.
Available from Holden-Day, Inc. Fall 1964.

Skvortsov, V. V., Kiktenko, V. S., and Kucherenko, V. D.
SURVIVABILITY AND INDICATION OF PATHOGENIC MICRO-ORGANISMS IN THE ENVIRONMENT.
Mono. Vyzhivaemost' i Indikatsiya Patogennykh Mikrobov vo Vnesknei Srede, Moscow, 1960, 348p.

Tarusov, B. N.
INITIAL PROCESSES OF RADIATION INJURY.
Mono. Pervichnye Protsessy Luchsvogo Porazheniya, Moscow, 1962, 96p.

Timakov, V. D.
NEW METHODS IN MEDICINE. (Novye puti Meditsiny). [Vsesoyuznoe Obshchestvo po Rasprostraneniyu Politicheskikh i Nauchnykh Znanii]. Seriya 8: Biologiya i Meditsina (USSR) 1963, no. 1, 47p.

Twardosz, Ferdynand.
DYNAMIC STABILITY OF A CONICAL SHELL UNDER LONGITUDINAL AND TRANSVERSE CONTINUOUS PULSATING LOADS.
Mechanika (Poland) 1962, no. 5, p. 3-81.

Vetchinkin, V. P.
AIRCRAFT DYNAMICS.
Mono. Dinamika Samoleta, Moscow, 1956, 422p. (Izbrannye Trudy, no. 1).

Yazdovskii, V. I.
PROBLEMS IN SPACE MEDICINE: COLLECTION OF ARTICLES BY FOREIGN AUTHORS.
Mono. Voprosy Kosmicheskoi Meditsiny: Sbornik Statei Zarubezhnykh Avtorov, Moscow, 1962, 323p.

PERIODICALS TRANSLATED COVER-TO-COVER

For basic list of Periodicals Translated Cover-to-Cover see Technical Translations Volume 10, Number 1.

This basic list is kept up-to-date by giving only changes in the subsequent issues of Technical Translations.

No changes are necessary for this issue.